Gleanings in Bee Culture

September, 1958 Vol. 86, No. 9

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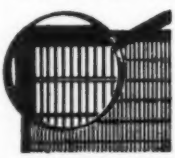

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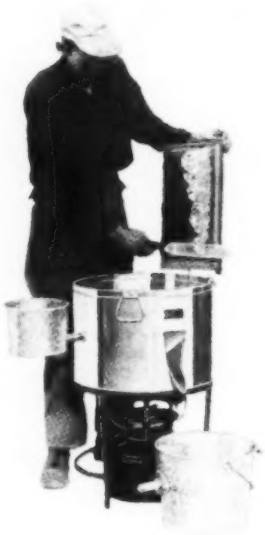

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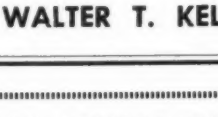

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Monthly HONEY Report

WALTER BARTH
Field Editor
San Antonio, Texas

HONEY PRICES are much the same as last month with the following national **average** retail honey prices showing this condition:

Extracted Honey (Liquid Only)

Size of jar	Price
8 oz.	23-25¢
1 lb.	39-42¢
2 lb.	69¢
3 lb.	89¢
4 lb.	$1.19
5 lb.	$1.39-$1.45*

* Prices as low as $1.25 have been reported.

Wholesale honey prices vary slightly depending on the locality, and, of course, on the needs of the packers. On the West Coast sage is bringing 12 to 12½¢ in bulk lots with orange a little higher at 12½ to 13¢. Here in Texas prices range from 11¢ for white, 12½¢ for water white and 9½-10½¢ for amber, and these are delivered prices. In other parts of the country prices are presently at 12¢ for white honey and 10½-11¢ for amber honey.

The crop is a little short in Oregon as it was cut short by rains and cool weather. Idaho and northern Utah expect a crop some above last year. Fair crop in progress in Washington State. Wild buckwheat coming in well in California and the sage crop is the best in several years. Here in Texas fair rains have improved conditions greatly. There isn't much clover in east Texas this year but the cotton prospects look good at this writing. As far as the Texas orange flow is concerned, it was apparently over-rated in my last month's report for the average yield was well below 60 pounds and readers from the Rio Grande Valley let me hear about it. North in Oklahoma the honey plants are in good shape and prospects are good.

Louisiana reports a better-than-average early flow and prospects are bright for fall. Bees are in good condition in Alabama where a fair crop of early honey was harvested. A fair honey crop reported in Mississippi, and if the rains let up a good honey crop is anticipated. A good crop of fine quality honey was obtained in middle and western Tennessee. Sourwood in the Eastern part of this state is just starting and prospects are good.

Too early to report anything definite from Montana and Colorado other than that the outlook is poor. There is a better outlook in Kansas where extraction is just beginning. Varied yields have been obtained from yellow and white sweet clover. A possibility exists that more alfalfa than usual may be left for seed production. In South Dakota cool weather and rains kept bees limited on work time up to the last of June. Recent warm weather has improved field conditions. In Iowa the weather has been unseasonably cool. Cloudy skies have slowed bee activity. There is an abundance of yellow sweet clover and white Dutch clover now and the flow is good when bees can work. Moisture has been light but plants are not suffering. Here, as in the other midwest states, honey and beeswax movement has been very light and prices are unchanged.

Along the Great Lakes the clover flow is spotty because of excessive moisture. This is particularly true in Indiana and Ohio. Still no crop reported, at this writing, from Michigan where beekeepers are still hoping. Honey flow spotty in Wisconsin while a normal crop is expected in Minnesota.

Moisture is ample in Pennsylvania but bees lack good working weather. In New York, conditions are very dry in the Hudson Valley with no crop in sight. Conditions in central New York are fair where clovers are in excellent

(Continued on page 540)

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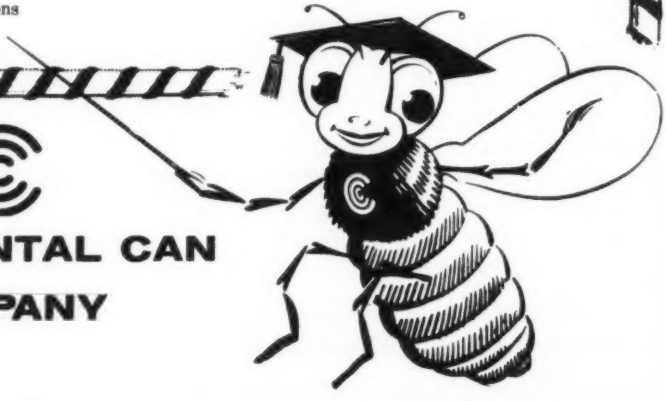

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Packed for winter in a well protected location.—Photo by E. F. Bea.

WINTERING BEES IN SOUTHEASTERN MINNESOTA

A man who started beekeeping 40 years ago has seen many methods of wintering come and go.

F. Q. BUNCH, Welch, Minn.

WHEN WE STARTED some 40 odd years ago, cellar wintering was considered the only way bees could survive the cold, long winters here in Minnesota. Single brood chambers were the common practice and we were fairly successful in wintering them in a cellar under our home.

Today with our colonies in three standard size hive bodies with shallow extracting supers piled on top of the brood and food chambers and the powerful force of worker bees which are present where no excluders are used to hinder the egg laying capacity of the present day hybrid queens, we could not possibly provide the labor or room for cellar wintering. Our style of wintering is not original and we have copied many of our ideas from other successful beekeepers in this area. We owe a debt of gratitude to Robert Banker for a number of time-saving ideas which he has worked out.

Our winter losses run one to two percent in an average winter and these losses could be mostly avoided if we could know in advance when we pack for the winter, just which queens were going to fail before spring. Queenless colonies, drone-laying colonies are the cause of most of our losses. We try to have a young queen in the hive and by this we mean a queen which has been raised during the year and not a queen from the previous season.

Packing with Honey

We like to pack with much honey and a vigorous colony of young bees.

In the fall we gas any colony which is on the inferior side, or does not seem up to par. The food from these colonies is stored and by feeding one yard pollen supplement in the spring we replace the cull colonies we destroy and in so doing are way ahead on time and money.

When we do have a 10 or 15 per cent winter loss it is not the packing or the weather that is at fault but nosema. By making laboratory examinations during a winter when we have unusual losses we find nosema present in practically every case. This in my opinion is the biggest problem for the northern beekeeper. He needs a cheap effective treatment which would not require too much labor and would do much to prevent any excessive winter losses, where the beekeeper uses any approved method of preparation for winter.

One thing over which we have no control is the weather. Extreme cold does not work a hardship on the bees if it is not prolonged to the point where they cannot move on to fresh stores. Also, nosema is found to be more deadly if the bees do not get a cleansing flight within a reasonable time (two or three months).

Pack for Insulation

By referring to our notes of past years we find that there is less queen loss in wintering if the bees are well packed. We used packing cases for years before our business expanded to a point where we could not stand the strain of lifting all those heavy colonies. Chaff or planer shavings were used on all sides and top with a minimum of six inches of insulation between the colony and the elements. This type of packing, for this northern area, is the best way to bring the colonies through winter as far as queen performance is concerned as there is almost no queen failure or drone-laying queens. This fact has been confirmed by Dr. Haydak of the University of Minnesota.

There may be a way to retain the advantage of heavy packing without resorting to the back-breaking job of old style packing cases and a number of professional beekeepers are working on a pressed-wood form to fit around the hives which will provide insulation which may be applied in minutes and with no great physical effort. This is still in the test stages and perhaps something may come of it.

Our System of Wintering

Our present set-up for wintering consists of the following: We want first a good strong colony of bees, with a young queen which has covered a normal number of frames with a good brood pattern during the normal laying period. Next we want a food chamber of dark combs which is entirely filled with ripened honey of good quality with a normal amount of pollen in these combs. The brood chamber should contain at least two or three filled or nearly filled combs of honey and pollen. The remainder of combs may have some scattering of pollen. As stated at the beginning of this article we let the queen raise brood in three standard hive bodies and as the honey flow is tapering off (or we expect it is about that time), we start crowding the colony on super room to drive the queen down into the bottom brood chamber and if this goes as planned and the honey flow continues as we have hoped, then we have lots of honey in the two top bodies by the time we are ready to pack. By that time the brood should be hatched out and the bottom body is mostly empty combs with a little honey in some of the frames in some of the colonies. This bottom body is removed and the bees are confined to the two top bodies, which should, as stated above, contain a solid body of honey and pollen on the top, and two, three, or even a little more in the body which is now placed on the bottom board. The bees which remain in the bottom (empty body) are shaken in front of the hive if the weather is warm enough so they will crawl in the entrance. If it is too cold to do that they are shaken on top of the hive on the top bars of the upper body. This empty brood chamber is taken to the warehouse and stored for the winter.

Now the bees are all down to their two story size, with entrance blocks inserted with a three-quarter inch opening (provided in the block for a bottom entrance). All our inner covers are provided with permanent shingle strips on the sides of the cover and lath pieces nailed to the one end to provide an upper entrance when the inner cover is inverted with the deep side down for

(Continued on page 526)

Lost, One Hive Tool

Ted at work in the bee yard. The dark foliage behind him is the lower portion of the basswood tree.

E. d. FOX
Washington 22, D. C.

BEFORE EXTRACTING time our honey room had to be scrubbed, windows washed etc. When these tasks were completed by me I added a fresh coat of paint to the floor for good measure.

At the window outside I noticed the ants had arrived before me. A good powdering with insecticide on the sill soon routed the undesirables. Up to now bees avoid the insect powder and we have not harmed them with it.

The window glass looked shiny clean with the exception of tiny dots of paint. I recalled, Ted painting supers early in the spring and knew he was the culprit who had spattered paint. As I scraped the window and thought unkindly thoughts of my spouse, he arrived upon the scene with his face stormy as a thundercloud. Seemed one hive tool was lost, strayed or stolen.

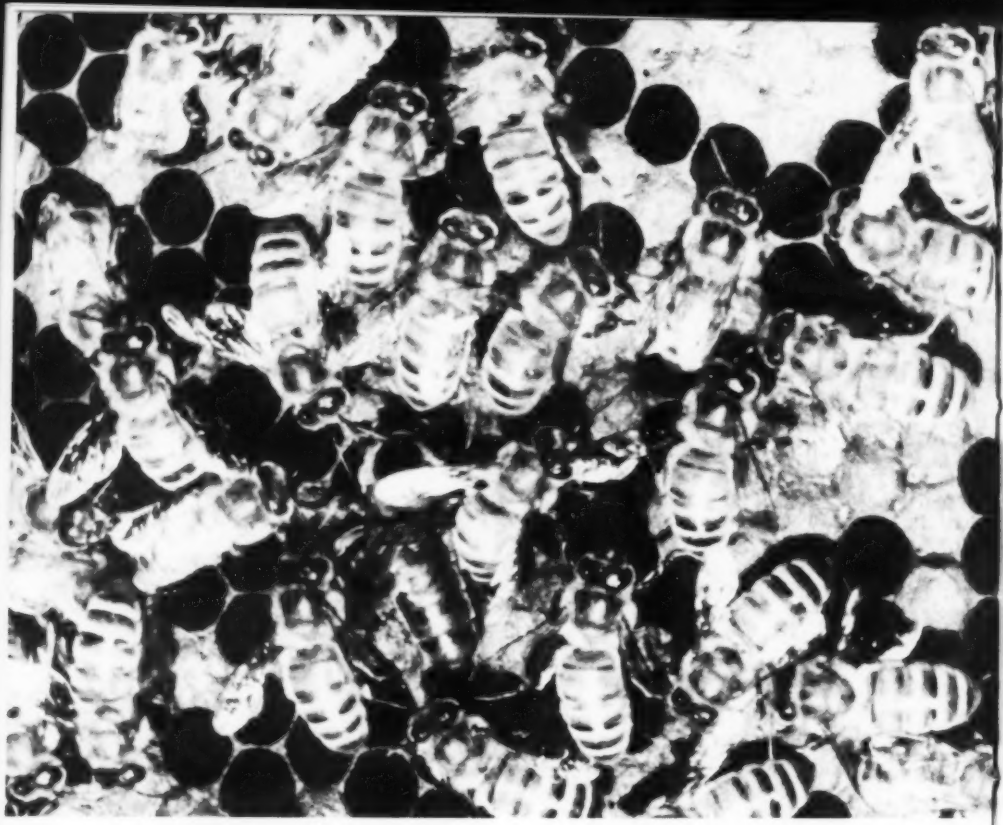
No one can "beekeep" without a hive tool so I helped Ted search. Didn't even mind when he accused me of opening the paint can with the tool and then misplacing it. Pleaded not guilty this time, however, for I had been using an old bee escape which happened to be nearby. Must admit it did not scrape paint as well as the hive tool.

Checked coveralls but no luck there. Ted is left handed and seldom places hive tools in proper place provided for it. He usually puts it in the large pocket in back of the suit. It could have slipped out of there for there was a large hole in the back flap of the pocket. Mystery how it got there for Ted did not remember backing into the smoker at any time.

This is the top of the snaae tree which shows what a nice fat shade tree it is.

This happened before fathers' day and when our daughter asked what Dad needed most I suggested the hive tool, which she included in her gifts to Ted.

(Continued on page 566)



Maintaining Good Queens

Try to have each colony as good as the best

MILTON H. STRICKER
Stockton, N. J.

DO YOU HAVE one "super-duper" colony in your yard that produces much more than the others? Have you ever asked yourself why they can't all be like this? Well I have and a good many years ago I tried to get them all to be like this and though I am far from accomplishing this ideal, my production average has increased by taking these steps:

First, I decided not to tolerate any poor queens if I could help it. I practice a rigid culling, and the first thing I look for when inspecting a colony is the brood pattern. If it is not the best, out she goes and a new one is introduced "pronto".

First Spring Inspection Most Important

Being a northern beekeeper whose season will not permit queen rearing

until sometime in May, I have some southern queens sent each week during April and early May. These are not ordinary queens but ones produced from my own stock which I send to the breeder each year. Almost any breeder will do this for you if the order is large enough and he finds your stock is worth mixing with his. Perhaps you can locate a queen breeder whose stock is better than yours. If so, buy early queens from him.

In this first early inspection, the general colony condition is examined and if there is a hint of a failing queen, or spring dwindling, a new queen is introduced no matter what the age of the existing one may be.

Requeen When Necessary

I used to make a practice of requeening every other year, but now I requeen when the colony needs it, and sometimes this will be once a year and occasionally twice. But no matter how often, it is surely worth it since a queen costing a little over a dollar is sometimes the difference between a crop of honey and no crop at all. It would not be so bad if these "star boarders" gathered enough to winter themselves, but oftentimes it will mean taking honey away from the producers to get the poor ones through the winter. This cuts the production and is definitely unprofitable.

During the latter part of May, I keep a few nuc boxes in each yard to supply new queens during my inspection. This is no effort since I am constantly grafting cells and raising queens for sale, incidental to my honey production.

Some sort of system of reservoiring queens during the summer for such a use is easy to set up. One man in this area, who claims he doesn't have the time to raise queens, buys queens which he introduces to nuc boxes in each yard, allowing them to lay until he wishes to use them, replenishing his stock as needed. Another beekeeper takes frames of eggs from his better producers, allows the bees to draw their own queen cells, under the queenless impulse, then allows them to raise their own queens in nuc boxes kept in each outyard. Any system is good if it gets you on your way to better queens.

I decided not to tolerate any poor queens if I could help it.

August First is My New Year

It is then I again examine colonies and anything that doesn't have a young and vigorous queen is given one. This operation is worked with the removal of the honey crop and carbolic cloths are used for the removal of the honey, while the inspection is done.

Colonies must have at least seven full frames of brood at this time. Each queen must be laying a solid brood pattern. The colony must have gathered a crop comparable to its neighbor and have gathered and stored an abundance of pollen in the lower story, or it is requeened at this time.

This inspection and requeening operation is called the beekeeper's new year because here you can evaluate your colony and see your chances of wintering these colonies and producing another crop next year. In this area a good colony in August will build up on the fall flow and be ready for the coming winter.

My next inspection comes in October, when I get colonies ready for winter. It is here I would rather take my winter loss than let colonies die during the winter season, thus losing valuable honey. I make an especially careful check of those colonies I requeened in August. If any of them are not up to specifications, I unite.

When Uniting I Do Something Pehaps Unorthodox

I unite this colony that is either weak, or headed by a poor queen, with

a good colony, placing it on the bottom board of the good colony, smoking both colonies vigorously and placing the original colony on top of it. If this makes a three or four story colony, about a month later I come back and remove the extra supers, making it a two story colony for winter.

I used to think that uniting two poor colonies would make one good colony, and in a very few cases it does, but mostly it makes one poor one that either "conks out" during a severe winter, or has spring dwindling in March and so remains a problem all year long. The addition of extra bees, brood, and honey to an already good colony is not objectionable, because the bigger the cluster in this State, with other factors being equal, the better the colony's chance of survival during the winter.

During the fall inspection when I see that the colony is well packed with an abundance of well-ripened honey and ample pollen, I rewrite the queen's age and if it is of special parentage on the escape board. When spring comes, I check these pedigrees and compare colonies to select the best breeders for the coming season. This little job is necessary in the constant struggle to maintain good queens of good stock for my area, and it is just as important to anyone who is producing honey for a livelihood.

My average production has gone up about 30 per cent in the last 12 years and though these figures are far from phenomenal, they are encouraging when all my neighbors tell me that New Jersey's production is falling off. I intend to continue these simple steps: Try to improve stock, keep an ample supply of young queens on hand, requeen whenever necessary and keep searching for the best producers in my area because as Doolittle said so aptly: "Upon no other one thing does the honey part of the apiary depend so much as it does upon the queen!"

WINTERING BEES IN SOUTHEASTERN MINNESOTA

(Continued from page 522)

wintering. This opening or entrance at the top of the hive is about ⅜ by 2½ inches and faces the same direction as the small bottom entrance.

For years I used no bottom entrance when using packing cases, however, when eliminating the packing cases we have gradually followed Bob Banker's procedure when using his inner covers which are described above. The center, or escape hole, is covered so no opening is left in the center of the inner cover. This we think is better than leaving it open as the moisture from the cluster will move out of the top entrance and provide a dry hive.

We put a chaff tray on top of the inner cover. This is same size as a comb honey super with a bottom of galvanized screen with a couple wood braces across the inside to hold the screen in place. The screen is stapled to the bottom of the chaff trap and then filled with planer shavings, sawdust or chaff. These are prepared as regular equipment for every colony and they help prevent condensation forming on the inner cover.

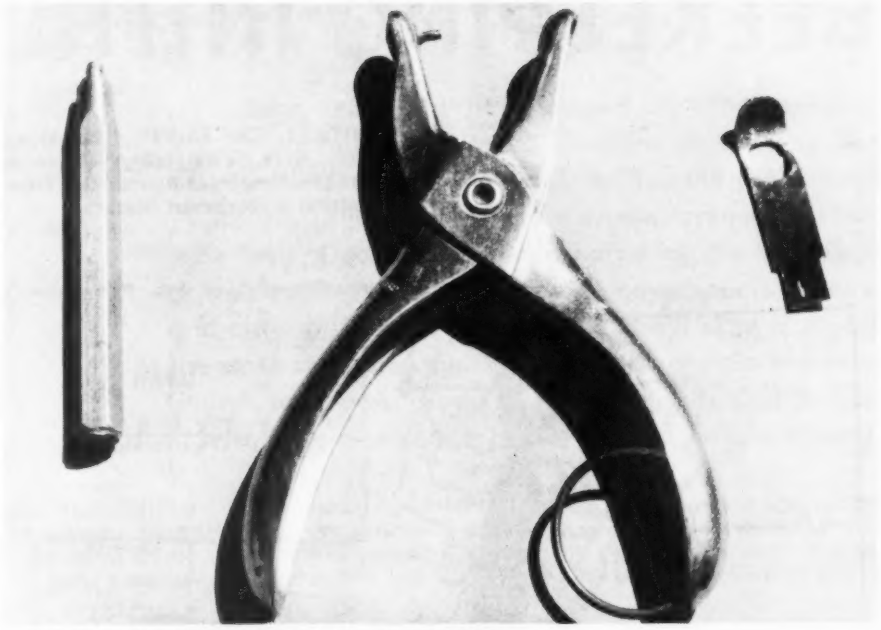
Packing the Hive

After the inner covers are in place we cover each hive with a wrap of "black jack" or light-weight black builders' paper. These are all pre-cut at home and ready for use. They are fastened to the hive with a builders' stapling machine. (This is another item which will speed up the work.) We make sure that a top opening is provided for each colony. The paper is neatly folded over the top of the chaff trap, the metal cover put on the hive and a heavy weight placed on top to prevent any wind from removing it.

By having all inner covers prepared with such a top entrance, a supply of builders' paper cut into correct length, and a quantity of chaff trays, one man can go into an out yard, and wrap and winterize it within a very few hours.

About Locations

We like to choose our locations where they are sheltered from the north and west wind, where the sun will quickly warm up the area if it does shine and this may give them a much needed cleansing flight, which they would miss if they were located in the shade.



WIRE CUTTING INTO FRAMES IS A NUISANCE

ROBERT J. WYNDHAM.
Upland, Calif.

WHEN MY COMBS are getting too old or when they are not straight I cull them. Also when more than 15 per cent of the cells are drone cells, I feel that it is better to replace them. I salvage a little wax, either by moving the frames up and down in a can of boiling water or by using a solar wax extractor.

Then the wires in the frames have to be tightened or the frames re-wired. Very often I find that the wire cuts into the frame sides. Therefore whenever I nail new frames, I insert metal eyelets in the frame sides. True, this is time-consuming, but I feel it pays in the end, especially as I found a few shortcuts. Here they are.

At the frame end where the wire will be nailed, I don't use the eyelets in the upper and lower holes, for the wire will not cut into the wood, where the wire ends are nailed. This saves one-fourth of the labor.

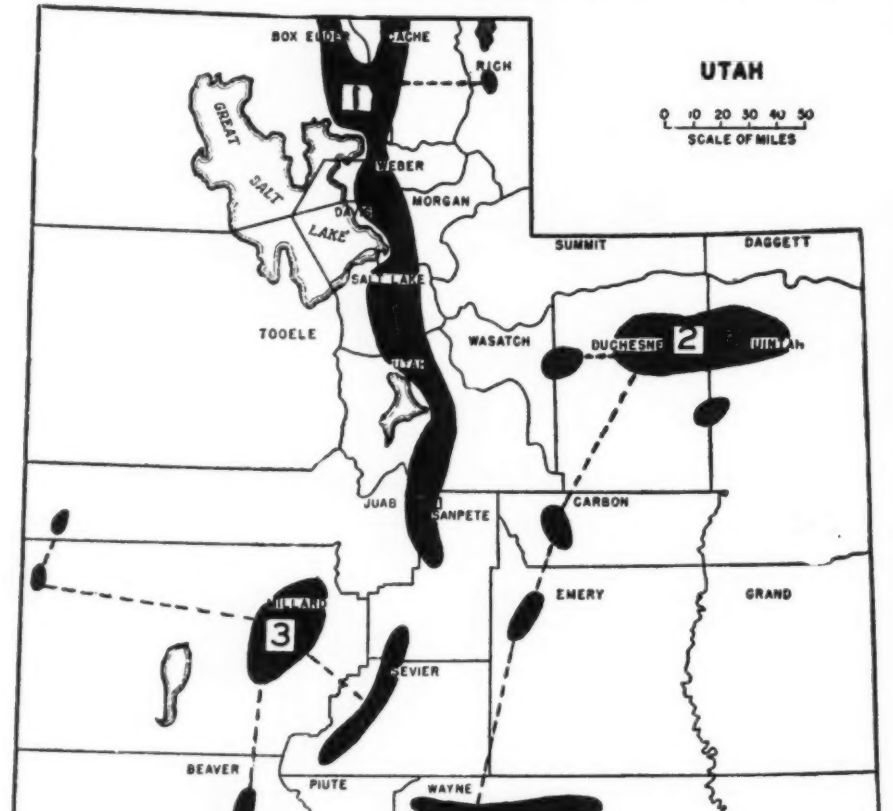
Then I found a way to speed up inserting the eyelets. Usually these are hammered in, before nailing the frames, with a small inserting tool sold by bee supply houses. See picture at left. It works fine, but it does not work fast. I bought in a dime store a paper punch, price 39 cents. I pulled out the paper guide, using pliers. (See picture.) Then I put the gadget in a vise and filed down the punching part of it, just a little smaller than the size of the eyelets. The modification of this little tool took me 10 minutes. Now I insert the eyelets with my modified paper punch and save time.

Another advantage is that it can also be used to put eyelets into frames before re-wiring them.

BEEKEEPING IN THE

MARSHALL D. LEVIN, U.S.D.A., Agr. Res. Serv., Entomology Research Division, in cooperation with the Utah Agricultural Experiment Station.

The four beekeeping regions of Utah. (From Vansell*)



BEEHIVE STATE

B & L Library

Bees and honey have played an important part in the life of Utahns since the time of the first settlers. The name proposed for the provisional state organized by a Mormon conference in 1849 was "Deseret", a coined name for the honeybee which still appears in titles of newspapers, banks, and other businesses in Utah. The straw skep is a part of the state seal, and the Bee Hive Girls are the Mormon Church-sponsored group equivalent to the Girl Scouts, with an organization based on the bee community.

HONEY PRODUCTION makes a significant contribution to the agricultural economy of the state. Fifty-four thousand colonies produced over 3 million pounds of high-quality honey in 1957. Furthermore, the bees flying from these colonies were the principal pollinators of flowers of alfalfa, berries, and deciduous fruits.

Geography

The state of Utah covers approximately 82,000 square miles, about five per cent of which is cultivated. Most of the state is 4,000 to 6,000 feet above sea level. The average annual rainfall in most cultivated areas varies between 10 and 16 inches and the relative humidity is generally low. Consequently, about two-thirds of the farming is done under irrigation. Most of the water for this comes as runoff from winter snowfall in the mountains. Honey production—in fact, most of Utah's agriculture—is dependent on the supply of irrigation water.

Honey Production

G. H. Vansell in 1949 divided the state into four beekeeping regions (Fig. 1), based on rainfall, supply of irrigation water, and climate as they affect plant conditions.

The main source of honey in all four regions is alfalfa. Until a few years ago sweet clover was also one of the main sources, but in some parts of the State it has been almost eradicated by the county roadside weed-spraying programs.

There are many minor sources of honey that are useful for build-up and occasionally supply surpluses. Among them are the various clovers, Rocky Mountain bee plant, dandelion, deciduous fruits, basswood, balsam root, buffaloberry, maple, and willow. For those interested in a more detailed listing of honey and pollen sources, the circular by Vansell* is recommended.

* Vansell, G. H. 1949. Pollen and nectar plants of Utah. Utah Agr. Expt. Sta. Circular 124.

In regions 1 and 2, colonies are usually not moved frequently nor far. By Utah and California standards these can be considered regions of stationary beekeeping. Few colonies remain permanently in region 3, because of a serious deficiency in build-up sources of nectar and pollen. Most of the 15 to 25 thousand colonies that produce honey in this region are wintered in California or other parts of Utah and are trucked into the region at the beginning of the honey flow. Probably no other region in the country has so many colonies moved in from such long distances in so short a period. A large proportion of the alfalfa seed produced in Utah comes from this region.

A considerable amount of alfalfa seed and the renowned Uinta Basin honey come from region 2. Here alfalfa and sweetclover provide the honey most prized in Utah and neighboring states. The fame of Uinta Basin honey is largely the result of promotion, because several other seed-growing areas supply honey of equal quality.

A small part of the southwestern corner of Utah is quite different from the rest of the state. It is at a much lower elevation, and the season is much earlier and warmer. The honey plants include species typical of the lower Sonoran life zone, such as mesquite, catclaw, manzanita, and others more commonly found in Arizona.

Bee Management

Although only region 3 is considered to have a migratory type of beekeeping, there is a great deal of colony movement each year in the other regions. Many larger operators move whole apiaries to several locations each season to take advantage of early stimulative flows from dandelion, deciduous fruits, and mountain flowers. Through these moves the colonies are able to build up their strength sufficiently for the main honey flow even after a nucleus is taken from each.

When second-crop alfalfa hay or seed provides the main flow, the bees sometimes barely make a living until the middle of July, although main honey flows can start at any time after the middle of June. Only rarely is a honey crop obtained from both the first and second flowerings of alfalfa. In these good years as much as 120 pounds per colony can be harvested. Average crops during the typically short-production season are more nearly 60 pounds per colony.

Partly to offset the relatively small per-colony yields, most beekeepers take care of many colonies. Several operators in Utah manage 3 to 6 thousand colonies with only one or two full-time helpers. In general, bee men assume that one man can handle up to 2 thousand colonies with only part-time help during the extracting season. Only 30 to 40 bee men in Utah keep bees as their sole means of livelihood. Another hundred or so keep from 100 to 600 colonies as a side line, depending on a farm or other job for additional income, and 200 to 300 hobbyists and "sideliners" maintain from 1 to 100 colonies. Most of the beekeepers in Utah practice a simplified type of colony management. In fact, it has often been said that our beekeepers don't manage colonies, they manage apiaries.

Problems

Utah beekeepers have much the same problems as other beekeepers. The large amount of alfalfa grown requires extensive applications of insecticides. It is a rare year when a number of commercial beekeepers do not have some of their apiaries weakened by insecticide poisoning.

The large-scale operators find good build-up and honey-flow locations hard to find. In spite of the size of the state, such locations cover only a small area, and competition is keen.

Operating costs are high because of the large amount of travel required in managing bees so widely distributed as are those of most commercial beekeepers.

Disease is seldom much of a problem any more. Most bee men feed sulfa as a preventive, and their annual losses have dropped to less than one per cent. Small beekeepers and hobbyists have more trouble with disease, but rarely does it get out of hand.

Equipment

Most Utah beekeepers use standard Langstroth hives, with the California-style cover and bottom board. Trucks are an important part of the equipment, and almost all of them have flatbed bodies with hooks on the sides. Colonies or supers are stacked on and roped down. Bees are moved with their entrances open, are loaded and moved at night or early morning before flight starts. A recent innovation is the use of a Lumite screen cover over the whole truck load, especially for long trips.

Extracting is usually done with tangential rather than radial extractors. Honey in Utah contains only about 13 to 16 per cent of moisture, and is difficult to remove from the combs. Those who have tried radial extractors claim they don't work satisfactorily for this thick honey. Hot rooms are utilized in many honey houses to speed up extracting.

Pollination

Little pollination is paid for in Utah. Deciduous-fruit production is concentrated along the foothills of the Wasatch Mountains, and a few colonies are rented for use in these cherry, apple, and pear orchards. Even though fruit production depends on honeybees

for pollination, fruit-pollination fees do not add significantly to the beekeeping industry's income. A few beekeepers have tried renting bees for alfalfa-seed pollination, but it has seldom been successful, usually for reasons beyond the control of the beekeepers. Farmers are eager to have bees in their seed fields, but are rarely willing to pay for their services.

Research on matters of apicultural interest started in Utah in 1935, when arsenic poisoning from industrial wastes and from untimely insecticide treatments was studied at the State University in Logan by Dr. G. F. Knowlton and associates. Since 1947 much research on pollination, as well as on poisoning of bees by insecticides has been conducted at Logan by members of the USDA Legume Seed Research Laboratory and the State University staff. Courses in beekeeping and insect pollination are also offered by the University.

Wholesale markets for honey and beeswax and complete lines of beekeeping equipment are available in both Salt Lake City and Ogden, Utah.

The Utah State Beekeepers' Association presents an opportunity for all persons interested in beekeeping as a vocation or a hobby to share their interest with others and keep abreast of the latest developments in the industry.

TOO MUCH PROPOLIS

H. H. ROOT, Medina, Ohio

AT A MEETING two rather distinguished looking, scholarly gentlemen approached me with some questions about propolis — what it was, where it came from. I explained that it is a mixture of beeswax and low-melting point resins in varying proportions, the resins coming from certain buds, like the pine, Carolina poplars, etc.

They asked if propolis had any commercial value and I said it was too sticky ordinarily to be used in polishes and that the collection of it would be too expensive. I said I had heard of its use during World War I, as a dressing for open wounds but I had no definite recollection along that line.

They asked two more questions— whether the beeswax and resin could be separated and if the propolis got into the beeswax there was any way of getting it out. I told them the resin could be "washed" out with fuming nitric acid but that this process also dissolved some of the essential oils in the beeswax. I added that the resin could be precipitated by simmering the wax containing it, over a strong alkali, like caustic soda. Since both these chemical treatments were too slow and expensive, I said the most practical way of eliminating the resin from beeswax, at least the greater part of it, was by filtering through activated charcoal.

At this point I was startled to hear one of the men say to the other, "Doctor, here's one of the best examples of natural catalytic suspension I know of". The other agreed. I began to wonder who these men were and why they were asking these particular questions.

Still thinking about it, I approached them later on, as they were leaving, and said, "Tell me, are you two connected with the Chemistry Department of—(the nearby University").

To my vast surprise they both began to laugh.

"No, we are just a couple of dentists and happened to hear that expression the other day, 'Catalytic suspension', and it sounded so very learned that we thought we would try it out on you. We saw you sober up; we saw the reflective mood come over you and were sure that our little joke worked. Thanks for your cooperation".

Our Cover

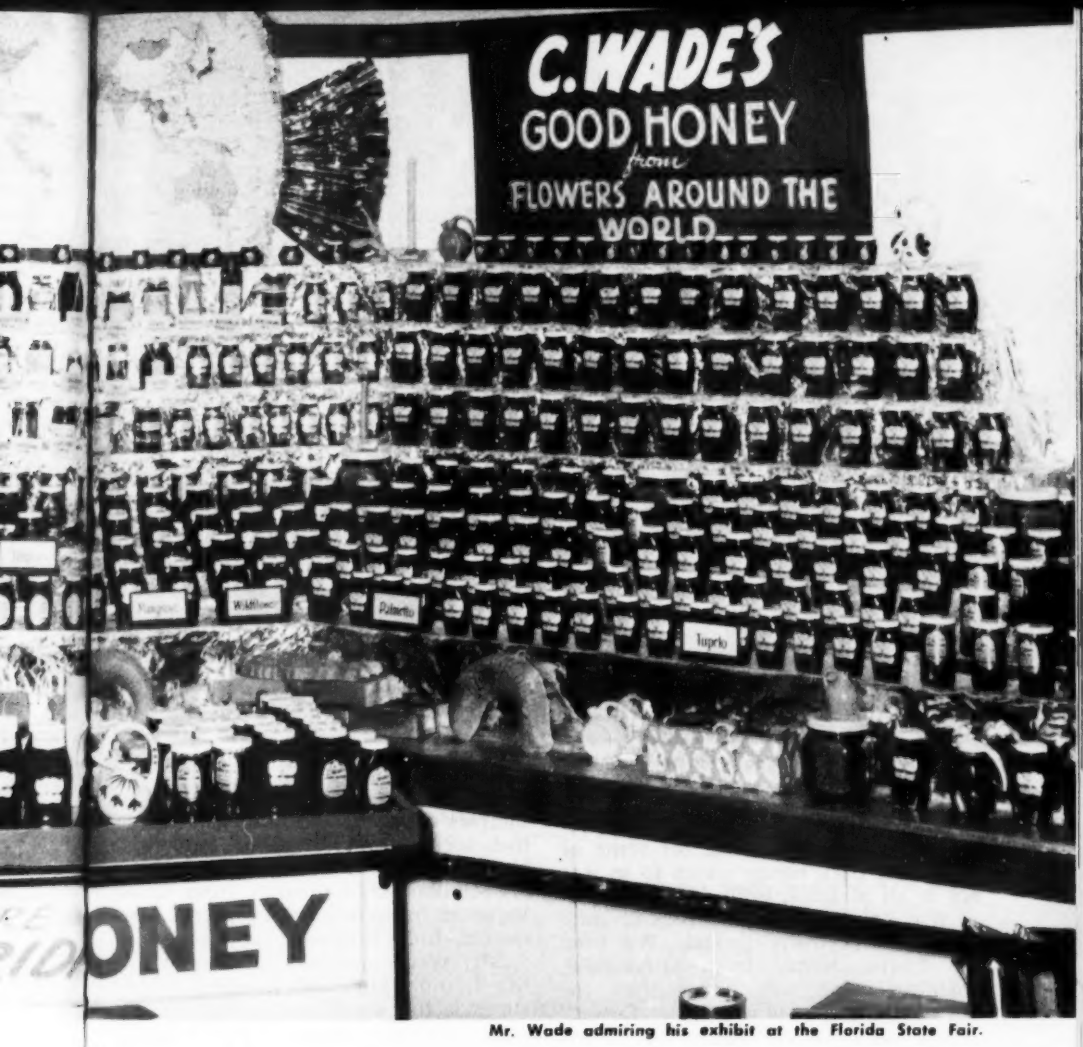
A beautiful autumn scene on a typical American farm. As fall progresses, more and more of these scenes will appear. Each one should remind us to slow our pace long enough to appreciate the beauty that surrounds us in this season.

HONEY Around the World

HENRY J. RAHMLOW
St. Petersbug, Florida

There are a number of factors that cause nectar to flow certain times and not others. Almost as amazing is the reason why honey has different flavors and colors.

VISITORS TO THE Florida State Fair in Tampa last February were impressed by the wonderful National Honey Show exhibit which occupied the entire wall along one side of the exhibit building. At the end forming an L was another exhibit at which spectators would give a glance, then stop and look again, then walk over in curiosity and ask questions of the charming lady and genial man in attendance. This exhibit was outstanding in many ways. On the wall was a large map of the world. Attached to many of the principal countries and states of the United States, were strings which led to jars of honey on the shelves, representing some of the honey poduced in each. There were 30 different flavors of honey shown, ranging from ling honey, made under the midnight sun in Norway; coffee honey from Guatemala, to rata honey from New Zealand.



Mr. Wade admiring his exhibit at the Florida State Fair.

Gathering samples of honey from countries all around the world as well as beekeeping, has become an absorbing hobby for Mr. C. Wade, 3222 Memorial Highway, Tampa, an electrician by trade. He has had many interesting experiences with collectors and missionaries in foreign countries. Miss Vivian Hodges, formerly of Tampa, now a Presbyterian missionary in Brazil, sent honey from that country in whiskey bottles, "it being the only kind of glass container available".

Samples have been sent to Mr. Wade by sailors in the Navy visiting foreign countries. A son-in-law is in the Air Force and has sent samples from different countries. Importers in New York and Tampa have provided a number of kinds. Friends, anxious to help with his hobby, collect samples as they travel through different states. All in all, we think Mr. Wade has perhaps the largest and finest collection of different kinds of honey in the country.

Three years ago Mr. Wade first entered his collection at the Florida State Fair. He won the special traveling trophy provided by the Commissioner of Agriculture, Nathan Mayo, for the best honey exhibit and has won the trophy each year since then.

Mr. Wade as he appeared on a T.V. show exhibiting his honey from foreign lands.

Different Kinds of Honey

We have often wondered how people could develop a taste for some of the strong dark honey which to us was not at all pleasing, until we remembered that "black strap" molasses is quite popular with many people. We tried the Coffee honey from Guatemala, black in color; rose honey from the same country; Cuban "wild flower" honey, all dark and strong in flavor, without developing any liking for them whatever. Yet many people seem to like them. Cuban honey we suppose, is sold more as a "medicine" than as a pleasant food.

Some of the other interesting kinds of honey Mr. Wade has collected are: peppermint and creamed white gum from the Westralian Farmers' Co-op of Perth, W. A. Australia; rape and linden honey from Holland; pine mountain honey from Switzerland and Bavaria, Germany; strawberry tree honey from Cyprus; acacia and lavender from France; heather from Scotland; cherry from an orchard in Marlborough, England; orange from Israel; black locust from Italy; lucerne from S. Africa; kiawe from Hawaii. Then there are samples of attiki from Athens, Greece; mel surfin from Belgium; pure Irish heather from the Wexford Beekeepers' Association; el aguinaldo from Cuba; logwood from the Bee Farmers' Association, Ltd., Kingston, Jamaica.

Mr. Wade also has one or more of the leading kinds of honey from 44 states in this country.

How Different Kinds of Honey are Produced

Isn't it amazing how different plants can produce such different kinds of nectar and honey—different in color, in taste, and aroma. This is the way nectar is produced, according to the best information we have been able to gather. First, the roots of plants absorb moisture from the soil which contains more than a dozen kinds of minerals in solution. Some minerals are absorbed in larger amounts than others, such as those we usually add to the soil as commercial fertilizers — nitrogen, phosphorous, and potash, and so often mistakenly called "complete plant food". The soil moisture with the minerals passes up through the stems and

branches of plants and into the leaves. At the same time, the carbon dioxide in the air enters the leaves through stoma (holes on the lower sides of the leaves). Then the wonderful process known as photo-synthesis takes place. The leaf is like a factory. The sunlight provides the "power". The "machinery" consists of the "chloroplasts" containing chlorophyl, which is the green substance of leaves and stems. The raw materials from the soil and the air are first broken up and then recombined, or "synthesized" into sugars. It is one of nature's most wonderful processes.

The sugar produced in the leaves is then translocated to other parts of the plants including the nectaries in the flowers. Here, there are gland cells which change the carbohydrate from the leaves into the form obtained by the bees. These cells have the ability to give the sugar solution its vitamins, color and aroma. The minerals from the soil are of course, also present. When conditions are favorable, a surplus of sugar is produced, resulting in a "good honey flow"

Conditions Which Affect a Honey Flow

Since sunlight and soil moisture are important factors in this process, we can see why we sometimes have a good honey flow and sometimes a poor one. If the soil is dry, moisture and minerals may not be brought up to the leaves in sufficient amount, so there will be a surplus of nectar. In dark, cloudy weather the process of photo-synthesis is not carried on at a maximum rate due to lack of light.

Inasmuch as the leaves of plants are so very important because they constitute the "sugar factory" of the earth, it is at once apparent how important it is that plants have healthy leaves, free from insects and disease injury. Leaf hoppers which can turn leaves of alfalfa yellow, have destroyed many a crop of alfalfa honey. Diseases such as scab, leaf spot, mildew, etc. which cover or destroy leaf cells, will prevent the leaves from producing sugar.

A good crop of honey therefore, depends upon the health of the plant; adequate sunshine; moisture and mineral elements in the soil available to the roots; correct temperature and clear air. No wonder beekeepers worry so much about the weather.

A Marvel of Plant Life

While we are considering the marvels of plant life, there is one more illustration we would like to give which is

(Continued on page 540)

This is an excellent exhibit of Mr. Wade's "honey from around the world".

Photo courtesy USDA

The Tragedy of the SPITTLE BUG CONTROL

By controlling the spittle bug we have creqted an even greater menace.

CHARLES MRAZ, Middlebury, Vt.

SINCE IT IS only natural for every business to increase the sale of their products, it is only natural for the insecticide industry to increase the sale of insecticides wherever possible, and the new approach now being developed is that of spraying forage crops. While those sponsoring this spray program for farmers may be sincere in believing it will help the farmer to produce more hay, in the view of past experiences with contact poisons and broad spectrum sprays, it would be well to view the consequences of such a program. One should look not only into the immediate effects, but to the long range results. What will happen next year, two years or five years from now under such a program?

Since forage crop spraying is relatively new, not many know the ecology of insect life in forage crops. Every field crop contains many insects, many of them live on the crop itself, many pollinate the crop and many insects are parasites and predators that live on other insects that feed on the field crops. Broad spectrum contact poison sprays as the name implies, kill insects on contact, so that every insect, good or bad that touches the sprayed plants will be killed.

Pests Become Immunized

If this were the end of it, it would not be so bad, but the results of such spraying are far more complicated than the simple killing of all insects. Insects have that remarkable ability of adapting themselves very quickly to almost any type of environment; some have this ability more than others. Many of these insecticides probably have a mutant effect that helps develop mutations among insects, and the more generations per season that the insect produces, the quicker they develop mutations.

It can be reasonably assumed that many insect pests will develop an immunity to almost any insecticide in about 15 generations. It must be remembered that the woolly aphid in California developed an immunity to hydrogen cyanide gas many years ago, which is one of the most deadly poisons known to man. Many common insect pests have more than one generation a year, some have as many as six or seven, even in the temperate zone. In other words, some insects such as aphids and mites can and do develop an immunity to these insecticides in two to three years. This means new and stronger poisons have to be used to kill them. Just how much newer and how much stronger poisons chemical companies can make to keep up with these insects remains to be seen. If there is any money to bet on this "rat race", I'll put my money on the insects to eventually win out.

What can a farmer expect to happen if he sprays his forage crop for spittle bugs? The amount of damage spittle bugs do is questionable. Some years they are worse than others, as they too, like other insects are under biological control in the field.

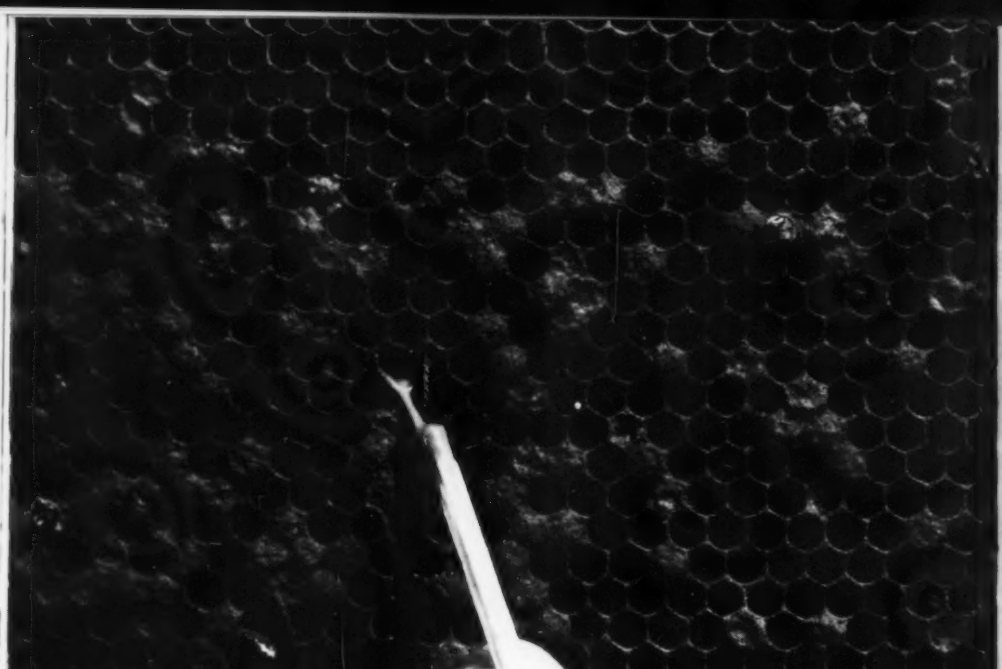
The above is a rather severe case of spray damage. Note the dead bees at the entrance. Many more were killed in the field.

Of course a farmer cannot tell if spittle bugs will be good or bad, so he sprays every year perhaps with heptachlor. For a year or two he may get good results, though often with spittle bugs a later infestation may show up worse than the first. This is usually due to killing off the parasites of the spittle bugs that control them under natural conditions. This is not the most serious result of a spray program. Far more serious is the build up of other insects that are far more destructive than the spittle bugs.

Other Pests Increase

One of these are the cut worms. These are common everywhere, but various parasites keep them under control most of the time. Under a spray program they are also killed along with their parasites. However, cut worms may have three or more generations a year, so in five years or less, spray will no longer kill them, but continues to kill their main parasites. The result of course is almost complete defoliation of the crop by cut worms. With field crops, one cannot be so promiscuous with spray poisons because of spray residue in milk. Milk has no tolerance and many of these spray materials have a bad residual effect. Some spray ma-

(Continued on page 561)



A typical comb infected with AFB

BACKGROUND AND RECENT AFB OBSERVATIONS

HERBERT STUDIER
Glenville, Minn.

(Taken From Minnesota Beekeeper)

AMERICAN foulbrood is now and always has been our main disease problem. While we did have a lot of trouble with EFB during the year 1945 and into 1946 we solved that problem with stock improvement and we can truthfully say that with us EFB is practically a thing of the past.

It was not until the year 1957 that we felt we had permanently solved our AFB problems as well.

We have been plagued with disease practically ever since we have kept bees—except perhaps the very first year, 1940, when we had only two colonies. From what I knew of bees then I really don't think we had American foulbrood untl the next season and possibly not until 1942. Be this as it may AFB did finally stick up its ugly head and has been with us to a certain extent ever since.

I took a peculiar interest in American foulbrood—its detection and also its possible cure. I learned to detect it in the very early stages. As an older brother put it I had developed an affinity for foulbrood eradication and this was before I had had any training or practical experience under a qualified inspector.

We of course treated our disease in the then accepted manner until the coming of sulfa. We burned and we boiled, sometimes killing and burning on the spot and sometimes if a mild case was found late in the season we would isolate and then extract and melt up—salvaging what we could.

Upon graduation from high school in 1914 I entered Dunwoody Institute in Minneapolis, Minnesota to take the two year course in electricty. I was not then sure that I could make a living for myself in the bee business even though I had already learned to love it more than my life-long interest in electricity.

Started Working for Tanquary Honey Farms

It was during my second year at Dunwoody that I got acquainted with Dr. M. C. Tanquary who was then teaching at University Farm in St. Paul. He was president of the 15,000 colony outfit known as Tanquary Honey Farms. He was determined to have me work for them as I believe he sensed an unusual enthusiasm in me for the bee work. Dr. Tanquary would refer to "The Bee Work" in such a way as to sound almost sacred.

No one wanted to take the job more than I but my draft board had to be consulted first. With their approval I joined the ranks of Tanquary Honey Farms in May 1943 where for two seasons North and South I learned something of all phases of beekeeping.

After one month with the company Dr. Tanquary put me on the road with Vern Hayden as company bee inspector. Vern was head inspector and a fine fellow under whom I enjoyed working. It was Dr. Tanquary's fond dream (to put it in his own words) "Completely eradicate AFB" from their bees and we came close to doing it in a couple of their outfits. In one of their units we had the disease down to as low as one case in 1500 colonies, but Dr. Tanquary's dream was never realized, nor did he live to see the advent of the sulfa treatment.

It was during my inspection work for Tanquary Honey Farms that I learned the heartache and tragedy of AFB. We burned up several lots of bees, equipment, and honey that was sickening.

Burned Colonies with 150 Pounds of Honey

I will never forget our visit to Gene Swanson at Spooner, Minnesota, who was running bees on shares for Tanquary. It was during late June or early July and we had already been over the package colonies in which we found only a very small amount of disease. They were in poor shape and had very little honey on them so we had not felt too badly about burning up one or two of these. The last day over there we went through Mr. Swanson's prize yards of bees—about 50 or so that he had successfully wintered. We found his 10 best colonies, some of them with all of 150 pounds of honey on them, much of it all nicely capped in light new combs. Apparently these strong colonies had picked up the disease some place. We phoned to St. Paul thinking perhaps Dr. Tanquary would authorize us to salvage what we could from this situation. His reply was negative for he said the risk would be too great. I will never forget the big hole we dug for that fire. It was a tragedy for us all.

(Continued on next page)

"BETTER BUY YOURSELF A REGULAR BEE VEIL. YOU ATTRACT THEM TOO MUCH USING MOM'S HAT WITH THE VEIL AND FLOWERS."

Ultra Violet-Ray Lamp

While at Dunwoody I frequently talked over the problem of AFB with my instructors and one of them suggested that the Westinghouse ultra violet-ray lamp was very germicidal and I had hopes this might cure AFB, so I wrote Hambleton about this but nothing ever came of it.

Started Using Sulfa

Back home with our own bees in 1945, and with sulfa, we began to work on our own disease. Perhaps it was because I had seen so much disease firsthand and its havoc that sulfa worked so well for us. I enthusiastically hunted down all our disease and treated specially and as often as necessary to get it cleaned up.

Looking back at sulfa I can say that it has saved us thousands of dollars from 1945 until 1951 at which time we were doing some early experimental work with terramycin.

Terramycin

Terramycin as we use it today is the most effective disease control method ever devised. We mix a 50 pound bag of TM-5 with 200 pounds of powdered sugar and then sift three or four times through screen. The inert ingredients in TM-5 seem to have a value of keeping the mixture soft and fluffy and if kept covered remains good for several months.

The year 1957 saw our first all out terramycin control program and we began feeding it over the frames—a small handful over the frames to a medium strength colony—a larger handful to a strong colony. We were astounded to get 100 per cent complete control. We did not have a cell of AFB in some 1500 colonies and nucs made up during the spring season. A follow-up of this method in Minnesota resulted in just as astonishing results, although after the rush of extracting it was not possible to make the rounds as often and in two yards we had not visited for a long time we found three cases of AFB. That was our total for the year—three cases out of 1700 colonies run for honey.

Atomic Radiation

In 1957 with the cooperation of Argonne National Lab (Atomic Energy Commission) and my brother Martin, senior chemist, and with assistance from my brother Rudy we ran an experiment which proved beyond all doubt that gamma rays from radio active substances such as cobalt will render AFB incapable of reproduction. To our knowledge this is the first time this has been done with AFB, although similar experiments in other fields with other bacteria have been similarly successful. It is my opinion drawing from the insight of my brother Martin who works for the atomic lab, that whole rooms full of AFB scales can be completely sterilized by this method. Approval by the atomic energy commission would be necessary, also a well-shielded facility, perhaps constantly supervised by a qualified AEC man to insure safety to personnel. This subject fascinates me but may never prove practical due to probable high cost, the elaborate safeguards necessary, and the good results now being obtained from antibiotics.

HONEY AROUND THE WORLD

(Continued from page 535)

almost beyond our comprehension. Graft a small scion from a branch of a Delicious apple tree onto the branch of a tree bearing sour apples. The scion will gow and when perhaps two feet long will begin to bear Delicious apples instead of sour apples, as does the rest of the tree. The leaves receive the same raw materials from the soil, the same carbon dioxide from the air and they produce the same kind of sugars which are translocated to the fruit buds. The ovaries in the flowers contain cells which synthesize products which determine the quality of the fruit—its flavor, aroma, and its very nature. Man has not yet discovered how to do this.

MONTHLY HONEY REPORT

(Continued from page 517)

shape. Fall prospects look good for New Jersey. The honey flow is just starting in Vermont where clover has been a week late. Some rains needed. There is a fair amount of clover there and it seems to be yielding now. More swarming here this season than Vermont beekeepers have experienced in the last five years. This swarming problem is found throughout New England and only the strong colonies are doing much.

Who Hurts Whom?

J. M. AMOS
Va. Agri. Ext. Service
Blacksburg, Va.

Who is getting hurt,
the large beekeeper or the small beekeeper?

IT ISN'T OFTEN that one goes to a beekeeper's meeting without hearing that someone is getting hurt. Not physically, of course, but by our system of marketing honey. The large beekeeper will say the small fellow hurts the market and the little fellow will say the opposite. The large man usually is diplomatic enough not to speak disparagingly of the small beekeeper openly at a meeting but the small beekeeper is likely to rant freely on the subject almost any place. The large beekeeper has learned that it isn't good business to make enemies. The small producer, as a rule hasn't.

Let us take a look at the situation today. The corner store that knows all of the customers is gradually giving way to super markets and self-service stores because it appeals to a person's integrity to be trusted with goods of his choice until he gets to the door. Is there anything more displeasing than to have a clerk ask two or three times if there is something for you? Most honest people wonder if the clerk is afraid the prospective customer is going to take something that he is looking at without paying for it. It isn't easy to make up one's mind concerning some things and looking them over is the only way to be satisfied.

In order for a store to stock a large number of articles for customers to

HAVE YOU NOTICED THE GLEANINGS "NEW LOOK"?

Compare this issue and last month's issue with any copy printed before May 1958. Notice the difference in the size and clarity of the pictures and the more modern style of layout?

This is all due to our new method of printing Gleanings by offset. If you like the Gleanings "New Look" let us know. We hope to hear from many of you, but if we don't, we will assume you prefer the "Old Look" and will return to printing Gleanings by letterpress.

Write Now!

choose from, it requires a great deal of space and a lot of shelves which makes it difficult to locate the articles wanted.

To sell honey or anything else through these markets it is difficult to get shelf space to display the article. A small beekeeper just doesn't have a chance because he is not able to supply the chain stores with a large enough volume of honey for any length of time. This type of market is open only to the packer or the very large beekeeper.

In years gone by the large producer and packer often criticized the small beekeeper for marketing honey that granulated and was of poor quality and appearance. In much of Virginia, and I presume the same condition exists in many places in the south, the large packer is offering comb honey for sale at prices with which the small producer cannot compete. This is done through jobbers or wholesale outlets to small stores. A lot of it isn't heated to clarify it satisfactorily, and much of it granulates on the shelf before being sold.

It is difficult to pack chunk honey and not have it granulate in a few months. A small beekeeper comes along and finds granulated honey on the shelf. To improve the untidy appearance of the honey and to remove the stigma attached to a fine product "gone bad" the small beekeeper agrees to remove the honey and substitute good quality, light honey. The grocer agrees to buy a case of honey from the small producer for doing him a favor. The latter assures the grocer that he can supply him with good honey the year around if the grocer will phone or drop him a card when he needs more honey.

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"On the other hand I think I smell a thief."

Live and Learn

by Propolis Pete

IF YOU READ this page last month, you will remember that I was griping about the weather, and another condition that I never saw before. So far as the weather is concerned, I'll still say "phooey". About the other condition though, it could be serious. In case you didn't read last month's page, I was griping about a scattered brood condition that had me puzzled. It looked like failing queens, but it wasn't possible that 23 queens out of 23 would fail all at the same time. So I developed the theory that it was caused by the weather. I was brought up sharply on my contention that the field bees were coming back in a hurry and dumping their loads in the first empty cell they camee to. It seems to be the consensus of opinion that the field bees don't dump nectar, they pass it on to the nurse bees. Be that as it may, somebody was dumping pollen and nectar (or honey) right in the way of the queen's laying pattern. In a couple of square inches of comb you would find everything in the bee hive. Eggs, young larvae, old larvae, capped brood, emerging brood, pollen and either nectar or honey.

The weather improved a bit, and the brood pattern likewise, but even yet it is still a bit scattered. Not the solid combs of sealed brood, or young brood of the same age. In most of the colonies, the brood is still scattered enough to justify requeening, but until I know more about what I am doing, I am letting things develop.

But two of the colonies didn't improve. Pretty soon there was dead brood mixed in with the other assortment. The dead brood increased and increased, and pretty soon there was a lot of dead brood and no sealed brood at all. I have never had American foulbrood, but I have seen it, and this isn't it. (My fingers are crossed as I write this with the other hand). I have had sac-brood at times, but this isn't it either. I never saw European foulbrood, so looked it up in my ABC & XYZ. There I found a pretty good description of what I had. The remedy given was to build up the colony with bees or healthy sealed brood from other hives after de-queening, and, after 10 days, requeening with good vigorous stock. That was the method 10 years ago, but a lot of water has gone under the bridge since then, so I wrote to my friend, the State Inspector for the latest treatment of European.

Much to my surprise, he didn't answer, but came in person. Said he never heard of European in this neck of the woods, so wanted to see for himself. He looked it over and said it wasn't European, in fact he didn't know what it was. He guessed poison, maybe. Anyway he took a comb to send to Beltsville, and in a couple of weeks we'll see what we will see. Wouldn't it be something if I have invented a new disease. We'll call it "Pete's foulbrood" and my name can go down in history along with Benedict Arnold and Quisling.

There may not be any connection between the scattered brood in the other colonies and what happened to these two. On the other hand there could be a connection with the spraying programs around here. There is no basis for any accusations, but I can't help but wonder if there is any connection between this and the wholesale spraying of the entire landscape last year to get rid of gypsy moths that never were around here anyway. In a way it doesn't seem possible that these two colonies should get such a dose. Sure, the weather has kept them drawing on their stores for a lot longer than would be normal, but they have been getting quite a lot of new nectar and pollen. In any event, we'll wait and see what Beltsville has to say about it before we go diving off the deep end.

Outside of that, there isn't much new around here. Last month I said that it would take a miracle to put in a honey crop, what with the rain and cold. We didn't get a full miracle, but we did get a half a miracle, and I'll be putting up half a crop anyway. That should be enough to take care of the customers who have ordered since last year, and if I keep my mouth shut instead of blowing about what nice honey I have, maybe the people won't come looking for it.

Editorials

Our Opinion of the Royal Jelly Situation

THE EDITORS OF GLEANINGS have watched the increasing public interest in the use of royal jelly as a food supplement. At the same time it has been disturbing to note the wild and irresponsible advertising claims made for royal jelly in newspapers and direct mail advertising. Very possibly some of the capsules sold as royal jelly contained little or none of this substance. The obvious thing happened—all royal jelly has been placed in one category and condemned. A recent article in Readers' Digest, "The Five Swindles to Watch For," certainly did just that. We believe this article went as far in the other direction condemning all royal jelly, as some of the hucksters have gone with their irresponsible advertising.

Proof of the value of royal jelly as a food supplement for human consumption has been sufficient to satisfy many well educated and sincere people. Others doubt its value for human use, as well as the quality of research that has been done thus far to prove royal jelly of benefit to the human body.

It is our sincere hope that conclusive proof may soon be found through research now being undertaken that will more clearly define the areas in which royal jelly may be beneficial to man.

The Art of Beekeeping is International

IT HAS BEEN SAID that "the origin of the art of beekeeping is hidden in the mists of antiquity". Each country of the world has developed its method of keeping bees but the principles of beekeeping are the same the world over.

The beekeeping industry is one of the oldest branches of agriculture. Honey is considered one of the oldest, if not the oldest, sweet.

Honeybees are needed in all countries of the world, not only for the production of honey but also for the pollination of farm crops. Without honeybees to pollinate some of the fruits, vegetables, and legumes, the yields would be lamentably small.

There should be a closer cooperation and coordination of effort between beekeepers in different countries, than at present. Our industry is international in scope. It is hoped that before long there may be a freer interchange of ideas pertaining to beekeeping which may be said to be an international language. All people who handle bees, regardless of color and creed, feel a oneness of spirit and have much in common.

The International Congress to be held in Bologna and Rome, September 15 to 23, should attract many beekeepers from over the world. This opportunity for an interchange of ideas should draw beekeepers of all countries closer together in a bond of friendship and cooperation.

Most Winter Losses Due to Starvation

REFERRING TO the honey report for July 1958, from the U. S. Department of Agricultural Marketing Service, we note that about 4,400 reports were received on causes of bee losses during the winter and spring. Causes of losses were 32 per cent from starvation, 21 per cent queenless, 16 per cent winter killing, 4 per cent from insects, 3 per cent from foulbrood, 3 per cent from spray poisoning, 2 per cent from rodents, and 19 per cent from other causes.

It is interesting to note that 32 per cent, practically one-third of the winter losses of bees was due to starvation. In some instances cold winter weather is blamed for winter losses, when, in reality starvation is the real cause. If beekeepers would leave an adequate amount of honey for each colony at the time bees go into winter quarters most of the winter losses could be prevented. In some parts of the far North where long protracted spells of extremely cold weather occur, the winter cluster of bees, not being able to move easily onto combs of honey, may perish. However, if there is an abundance of honey in combs, directly above the winter cluster, the bees in the winter cluster are usually able to move onto the combs of honey.

In some instances where there is an insufficient amount of honey in the combs directly above the cluster, the bees will consume all of the honey in the combs and reach the top bars of the frames. During a prolonged, extremely cold spell, the winter cluster may not be able to move laterally or sidewise onto combs of honey that may be near the sides of the hive. If however, a mild spell of weather occurs, the winter cluster is able to move onto fresh honey, in order to avoid starvation.

It would appear that most beekeepers have to learn, the hard way, that in order to winter bees successfully in the north it is absolutely necessary to have a super-abundance of honey in each hive, properly placed, late in the fall. The extra amount of honey is never lost. If the bees do not consume all of it during the winter they will need it in the spring for brood rearing.

Please do not let your bees starve during this coming winter.

Wild Bees and Wild Honey

OCCASIONALLY WE HEAR some people talk about swarms of wild bees and these same people may talk about wild honey. We wonder just what they mean by these terms. Apparently they think that bees found in bee trees or crevices of rocks are of a wild variety. If we could only know the facts it seems probable that some of the swarms of bees in trees originally came from hives in some beekeeper's apiary.

A beginner beekeeper who has started some hives of bees from packages and queens received from the South may imagine that he has tame bees. Some day he may wake up to the fact that his bees are not so tame as he thought they were. A swarm may issue from one of his hives and cluster temporarily on a branch of a crabapple tree and while he is preparing a new hive for the swarm, the bees may take off in the direction of a swamp or woods. The writer had this experience many years ago in northern Michigan. An enormous swarm, in fact two swarms that had united were put into a three-story hive, because it took that many stories to hold the swarm. Three days later, these tame bees became wild and after leaving the hive and circling around in the air for a few minutes, started out in the direction of a large swamp three-quarters of a mile away. The writer took after them in an automobile, since the swarm flew parallel with the road. Apparently the scout bees had sought out a hollow tree in the large woods and these bees which had been comparatively tame prior to the time they swarmed, suddenly became wild and found a new home in the woods.

Bees in a bee tree respond to the same stimuli as do bees in a factory made hive. Bees in a hive are as wild or as tame as bees in a tree.

We have heard of wild honey being advertised. Bee hunters who cut down trees in order to secure the bees and the honey would likely call such honey wild

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FROM Foreign LANDS

Translated and Edited by ERIKA BARTH, San Antonio, Texas

Honey for Hoof and Mouth Disease:

THE GERM-FIGHTING substance found in honey is called "Inhibine" This Inhibine checks development of the cause of typhus, paratyphus and diptheria, among other infections. Mouth infections have been treated successfully because of inhibine, especially hoof and mouth disease in cattle.

Nine cows and 16 pigs were treated with honey against their hoof and mouth disease. From the first to the second day, mouths and hoofs were painted twice daily with honey. Although the animals were in great pain at first, the development of blisters was checked by 50 per cent. On the third day all animals were free of pain. The infections disappeared and the parts of the mouths and hoofs that had been festering were almost completely healed.

From the fourth to the sixth day all animals were treated only once a day. On the sixth and seventh day they had recovered completely without having received any other medication.

There seems to be the possibility that the honey weakened the bacteria to such an extent that it caused only a modified harmless infection.

Dr. med. Gyula de Szilvay/ Bremen, in "Boden und Gesundheit", Germany.

Royal Jelly and Research:

DR. REMY CHAUVIN reports the following in **Apiculteur** (April '57): The effect of royal jelly taken by mouth is the object of quite a few discussions in which beekeepers have also joined. They, however, display more business sense than scientific knowledge.

Our first experiments with patients who reacted favorably to royal jelly injections, showed no demonstrable reactions to it when taken by mouth.

Dr. Decourt published results of his experiments in "Royal Jelly from apis mellifica and its effects on higher mammals", and gives the effects of royal jelly as follows:

1. Strong effects in 15-20 per cent of cases.
2. Weaker, but still noticeable effects in 20-25 per cent.
3. None, or very slight effects in 60 per cent.

Abelles et Fleurs, June 1957.

Nature Study at School:

TEACHER: "Well, Tommy Jones, what have you to tell the class today?"

Tommy: "Well, Miss, an ant is the trongest creature alive for its size; it can lift 200 times its own weight!"

Then Teddy Smith raised his hand. "Please Miss, my father weighs 200 pounds and I saw a bee lift him four feet off the ground in one jump."

Australian Bee Journal, Dec. 157.

Delicious honey peanut butter cookies for the back-to-school lunch box.—Photo courtesy Kellogg Co.

BACK TO SCHOOL

MRS. BENJ. NIELSEN
Aurora, Nebraska

IT'S BACK TO SCHOOL for hundreds of small fry and Mom must pack lunches again. Perhaps your young folks are fortunate enough to share in a hot lunch or cafeteria plan. Even so there will be after school snacks, definite, steady raids on the cookie jar. So how about some easy-to-make honey way gems?

This tasty super-nutritious sandwich spread, ready in a twinkling may become a favorite at your house, too. Stir honey into peanut butter either smooth or chunk style. Cream thoroughly and spread on crackers or bread slices. And the peanut butter won't stick to the top of the mouth! Wonderful! And delicious!

Try these Mom, and be prepared for lunch box or snacks.

Honey Peanut Butter Cookies

One-half cup soft butter, ½ cup sugar, ½ cup honey, 1 egg, well beaten, ½ cup peanut butter, 1 cup whole bran cereal, 1¾ cups sifted flour, ½ teaspoon baking soda, ½ teaspoon salt and 1½ teaspoons vanilla.

Blend butter and sugar; beat in honey, egg, peanut butter and bran. Sift together flour, soda and salt; add to first mixture and mix well. Stir in vanilla. Chill about 1 hour. Form dough into small balls and place on ungreased baking sheets. Flatten with tines of fork, making a criss-cross design. Bake in a moderate oven, 375°F. about 10 minutes. Yield: 3½ dozen cookies, 2¾ inches in diameter.

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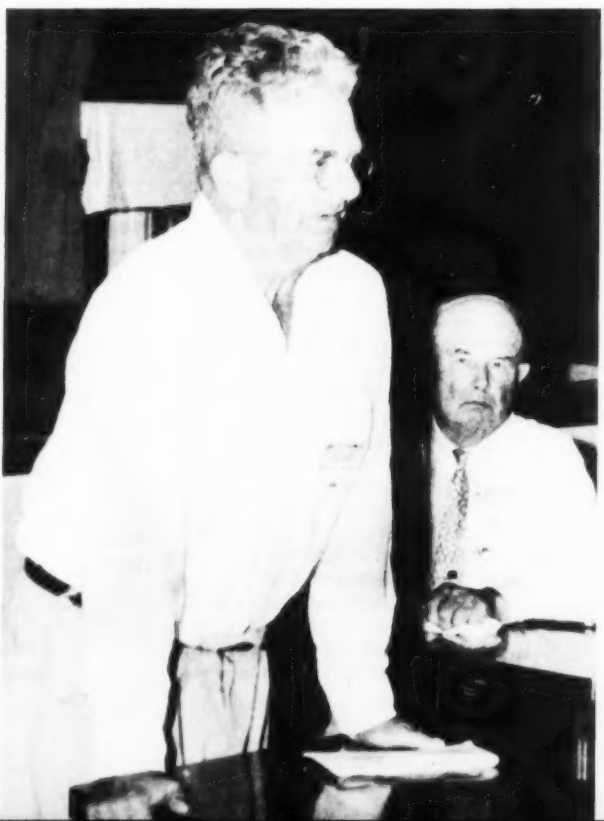
NEWS REEL

BEEKEEPERS HAVE TO EAT. Over 200 Michigan beekeepers met at Ionia Fair Grounds, July 18, for their summer meeting. This shows a part of the group enjoying their noon day lunch, under the trees in the park adjoining the youth building where the meeting was held. It was one of the best meetings held in recent years.—Photo by Kenneth E. Farner, Flint, Michigan.



Dr. V. G. Milum, Apiculturist at the University of Illinois, delivers his talk entitled "Recent Observations" to beekeepers who attended the Illinois State Beekeepers' summer meetings at Belleville, Illinois. Seated at Dr. Milum's left is H. E. Dale, president of the Illinois State Beekeepers' Association. The St. Clair Beekeepers' Association is to be congratulated for being the sponsors of a very successful summer meeting.

Carl Cottingham of Miles, California, is shown here inspecting one of the colonies in his apiary. Carl obviously enjoys keeping bees as a hobby. Our local associations should do more to encourage this sort of interest in beekeeping among the young people in their area. —Photo by Art Vargas.

One of the apiaries in the region of the Valley of the South Morava, Juzna, Morava, where conservation work is being carried on to protect soil from erosion as well as to protect the railway line and motor road leading from Belgrade to Salonique. It is a mountain region with many pasture grounds, meadows, and is very suitable for bee breeding.—Photo by ing. J. Kulincevic.

XUM

Research Review

By DR. ROGER A. MORSE
Research Editor of Gleanings and Ass't. Prof. of Apiculture
Cornell Univ., Ithaca, N. Y.

Notes on Packing Bees for Winter:

FOR A PERIOD of 10 years data has been taken on colonies in Minnesota which were heavily packed, lightly packed and wintered without packing. The results showed that heavily-packed colonies had an average mortality of 2.9 per cent while the lightly packed and non-packed colonies had mortalities of 6.4 and 18.4 per cent respectively.

The author indicates that this data agrees with data gathered by other researchers in New York, Ohio, and Minnesota and with a similar experiment conducted in Manitoba.

The cause of death in the most cases was "cold starvation", which simply means that the bees were unable to move to available honey during a long cold spell despite the fact that there were abundant stores in the hive.

Not only did the heavily packed colonies winter better but they were also stronger in the spring. The heavily packed colonies had 25 per cent more brood and the lightly packed colonies had 19.2 per cent more brood than the non-packed colonies.

Haydak, Mykola H.
Wintering of bees in Minnesota. Journal of Economic Entomology 51: 332-4. 1958.

"Loafing Bees?"

ANOTHER FALLACY in the slogan, "busy as a bee", appears to have been established by research in England. It has been previously demonstrated that foraging bees can be "time-conditioned" so that they will take food at only certain hours. A question then arises as to what these bees do during the rest of the day. Time-trained bees were marked and watched in an observation hive and it was noticed that they remained inactive on the combs. This was despite the fact that the rest of the colony was working hard. At the same time these inactive workers did not take or give food or enter into other activities of the hive.

Hammond, J. A.
The inactivity of the hive of foraging honeybees. Bee World 39: 179:80. 1958.

Passion Fruit Pollination:

THE PASSION FRUIT is becoming of economic interest in Hawaii but in certain areas it has not satisfactorily set fruit. The heavy, sticky pollen is not wind-borne. It is ripe on individual flowers before the female part of the flower is receptive to it. This means that insect pollination is necessary.

The honeybee and a carpenter bee (a bee about the size of and somewhat resembling a bumblebee) were the most important pollinators in Hawaii. Several other insects also visit the blossom though not in great abundance.

Nishida, Toshiyuki
Pollination of the passion fruit in Hawaii. Journ. of Economic Entomology 51: 146-9, '58.

Further Royal Jelly Research:

RECENT STUDIES on royal jelly indicate that oxygen is consumed by fresh jelly. This activity was not found in jelly collected and held at room temperature for six to eight hours. No such activity found in one-day-old jelly stored at -18°C. Further work indicated the activity did not involve an enzyme.

This study is part of work started to determine the role royal jelly plays in queen development.

Dixson, S. E. and R. W. Shuel.
Studies in the mode of action of royal jelly in honeybee development. I. Changes occurring in fresh royal jelly determined by Cartesian diver respirometry. Canadian Journal of Zoology 36: 197-204. 1958.

Let's Talk About HONEY PLANTS

HARVEY B. LOVELL
University of Louisville
Louisville, Kentucky

THE MAINE beekeepers held their second summer meeting at the home of Roy Genthner at Nobleboro. The speakers were Henry Besten, the well-known novelist, who discussed America's contribution to civilization; Donald Chandler, horticulturist and gladiolus specialist, who discussed the importance of bees as pollinators; and Harvey Lovell, who discussed New England honey plants. The president, Leon Hall of Chelsea, presided.

The discussion dealt particularly with bees rented for pollination. Several beekeepers present greatly increase their income by renting hundreds of colonies for blueberry pollination at prices ranging from $7.50 to $8.50 per hive. Usually one hive is used for each two acres of blueberry pasture, but recently several growers have discovered that doubling the number of hives greatly increased the crop. Instead of increasing the number of acres maintained in blueberry pasture, some growers have decided that it is more profitable to merely increase the number of colonies of bees used in pollination.

The largest beekeeper present was J. H. Caswell of Middleboro, Massachusetts, who moved 1000 colonies for blueberry pollination into eastern Maine this summer. He had bees at Colum-

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Part of the 334 people who attended Ohio's summer meeting listen to Charles Reese answer a question during "Let's Quiz the Experts".

OHIO STATE SUMMER MEETING

Held at the "Home of the Honeybee", Medina, Ohio—July 26 and 27

WHEN 334 PEOPLE register at a State Meeting and 179 sit down to the banquet, it is obvious that the Publicity Committee, headed by the President of the Ohio State Beekeepers' Association, Harry Vandenberg of La Grange, Ohio, did some effective publicity work. Such a meeting does not just happen.

Beekeepers from Pennsylvania, New York, Michigan, Indiana, California, Virginia, New Mexico, and Canada were in attendance. The theme of the meeting was, "Youth in Beekeeping". However, the program appealed to people of all ages.

Following a frame nailing contest in charge of Ted Manns, Oberlin, Ohio, and a smoker lighting contest in charge of Fred Oppliger, President of the Medina County Beekeepers' Association, the State President, Harry Vandenberg, got the program off to a good start by calling on George Rehman, a well-

known commercial beekeeper in western Ohio. Mr. Rehman's talk was leveled mainly at young beekeepers planning a lifetime with bees. He said that in his opinion beekeeping has as good a future as any other branch of agriculture.

Mr. Rehman handed out some sound advice:

(1) Use good equipment and never be satisfied with hives that do not have proper bee spacing.

(2) Stick to standard equipment. It is more easily manipulated and has a higher resale value.

(3) Save more than you earn. Have a few extra dollars tucked away for a rainy day. There is bound to be an occasional lean year.

(4) Support your beekeeping association and be loyal to the bee inspection force.

Charles A. Reese, extension Apiarist for Ohio, in his talk, "Common Errors Made in Beekeeping", mentioned attempting to manipulate colonies when the weather is unsuitable. Beekeepers having bees in towns and cities should be careful to open hives only during the warm part of the day when there is a honey flow on, in order to avoid getting bees stirred up so that they sting neighbors.

Another common fault among both beginners and experienced beekeepers is not leaving a sufficient amount of stores with colonies in the fall to last them during the winter and early spring months.

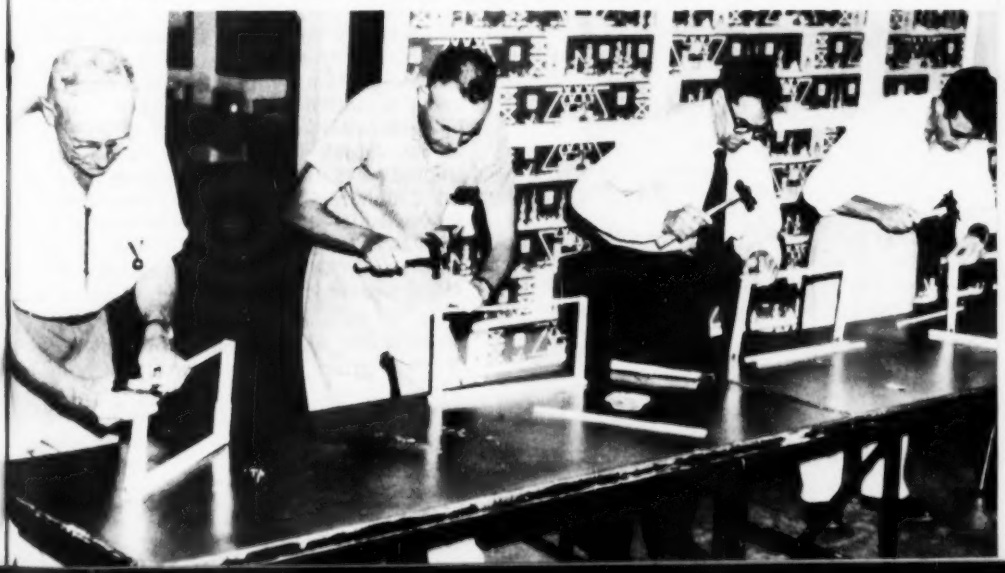
Seymour E. Bailey, Ohio State Bee Inspector, conducted a panel during which he called on a number of the Deputy Bee Inspectors to give some of their experiences. It would appear that most bee inspectors could write an interesting book on what they have found during inspection work. One beekeeper, instead of putting his money in the bank, put it in a bee hive, thinking it would be perfectly safe. It was, until the inspector found it.

One of the most interesting parts of the program was a question and answer session conducted by Jack Deyell. Beekeepers were asked to drop their written questions in a box. It was unnecessary to sign the questions. This seemed to be an advantage, in that when questions were answered, no one in the audience knew who wrote them. Some of the experts, Dr. W. E. Dunham, Charles Reese, Emerson Long, and George Rehman, did their best to answer the questions asked. Naturally there is bound to be differences of opinion concerning answers that should be given to certain questions. Even the experts do not always agree.

There was a demonstration in manipulating a hive of bees, conducted by John Root, Managing Editor of Gleanings. 4-H boys and girls participated.

The banquet in the evening was one of the high-lights of the meeting. Alan Root, General Manager of The A. I. Root Company, was master of ceremonies. After presenting a number of

The four finalists in the frame nailing contest are here competing to determine the state champion. Although it is not evident from this picture, Ralph Eaglesfield of Cleveland, Ohio, second from right, won.



The two host presidents, middle, Fred Oppliger, Medina County Association, right, Adelbert Shuster, Lorain County Association, discuss the meeting with President Harry Vandenburg.

the celebrities he called on the guest speaker, James B. Wells, Executive Assistant to the Director of Ohio's Department of Natural Resources at Columbus. Mr. Wells gave an excellent talk and it was brought home to us beekeepers how dependent we are on the various resources we have, for success in beekeeping.

Two typical members of the Ohio State Association. Left, E. W. Long, a commercial beekeeper with over 3000 colonies. Right, Don Davies, a hobbyist with two colonies, and a member of the Cleveland Fire Department.

Tom Keesee of Columbus, Ohio, vice-president of the Ohio association occupied the chair during the last day of the meeting.

Dr. W. E. Dunham of Ohio State University, gave an excellent talk on the topic, "Honey, the Sweet Nature makes Ready to Eat". Dr. Dunham mentioned the fact that honey does have competitors and that we need to boost our product continuously. It would seem that most beekeepers could do more than they are doing in promoting the sale of their product.

Honey puts no tax upon the digestive system. Honey produces energy. It has been demonstrated that little digestion is necessary and that absorption into the blood stream takes place quickly. Honey contains vitamins and minerals and is a suitable food for infants. Since bacteria which cause diseases in human beings cannot live in honey, it is considered a safe and wholesome food. Dr. Dunham said that in his experience in roadside selling he finds that the public wants a honey with rich color and flavor and that the majority of people prefer light amber honey.

H. R. Swisher, Secretary of the Ohio Association, was in charge of drawings for free prizes and many useful articles were handed out by the various bee supply companies that contributed.

Paul Steffen of The A. I. Root Company conducted a final panel entitled, "Let's Quiz the Experts". The panel consisted of Charles Reese, S. E. Bailey, Jack Deyell, and Dr. Dunham. The questions covered practically the entire field of beekeeping and some of them were difficult to answer. This part of the program gives an opportunity for audience participation and that apparently is what counts in having a successful program.

This summer meeting will go down in beekeeping history as one of the best ever held and even though some beekeepers were not securing a good crop, at least up until the time of the meeting, they were hopeful for the future of our industry.

LET'S TALK ABOUT HONEY PLANTS

(Continued from page 551)

bian Falls, Jonesboro, Lubec, Limestone, Calais, Machias, and adjacent towns. In one location he placed 100 hives weighing 3000 pounds this spring, and brought them back weighing 7000 pounds, the gain coming almost entirely from blueberry nectar. In general, however, it has not been a good year either for blueberries or their honey, since there have been too many cold wet days this spring and summer.

Cranberries. Mr. Caswell also pollinated many cranberry bogs on Cape Cod this summer as usual. He gets hundreds of pounds of cranberry honey which he describes as having a reddish color and a fine flavor. He packs it in one pound jars and wholesales it to a New York dealer for 31 cents a pound. He once made 600 pounds of cranberry honey from one hive. The cranberry flow lasts about two weeks, but this year was not up to its usual standard.

Clethra. This unusual honey seems to be stored pure only in southeastern Massachusetts, where hundreds of acres of old pastures are completely overrun by sweet pepperbush (**Clethra alnifolia**). For some reason beekeepers have been marketing this honey under its scientific name. Mr. Caswell has his home apiary in this desirable region and extracts and sells his Clethra honey separately. He finds that he can sell his honey more easily and for better prices by keeping the different kinds separate and bottling them under their floral name. Of course many apiaries are located in areas where there is no clear-cut source of honey other than the clovers.

Smooth winterberry. Mr. S. E. Harriman of Kennebunkport sent a specimen of a local honey plant in his area to the state university and showed me their reply which stated that the plant was **Ilex laevigata**, the smooth winterberry. He reported that his bees worked it in preference to milkweed and he believed that much of his early honey had come at least in part from winterberry.

Mr. and Mrs. Harry Chase of Hanover agreed to entertain the state group in late August. His bees are also rented to pollinate blueberries and cucumbers and one hive is rented by the season for $8.00 to pollinate a field of strawberries.

Buckwheat. Donald Chandler of New Gloucester planted an acre of buckwheat in southern Maine and noted that his bees worked it freely for a three weeks period. Some were collecting pollen but others were apparently getting nectar. When Professor Hepler of the University of New Hampshire extracted it for Chandler, he could detect no taste or odor of buckwheat honey. It is a mystery to him what the bees did on the buckwheat for three weeks.

This summer I am taking colored motion pictures of bees working on leading honey plants in Maine. Among the ones most common which I have photographed are:

Canada thistle. Bees are especially fond of this thistle and two or more bees will often be working on the same head. There are many small patches scattered over waste ground and the abundant nectar must add considerably to the summer crop. The honey is white and mild and mixes well with the clovers. Unfortunately this plant is a bad weed and is allowed to blossom only on waste land.

Fireweed or willow herb. This is a beautiful plant with long clusters of magenta flowers which greatly improves the beauty of the roadsides all over northern New England and southern Canada. The remarkable propensity of this plant to spring up after fires has

(Continued on page 560)

My Experience In FALL APIARY MANAGEMENT

HOWARD J. ROCK, Dale, Wisc.

What you do in the fall largely determines next years's crop. Mr. Rock, who has kept bees all over the Western Hemisphere tells why this is true.

"IF IT WEREN'T for all the things we are going to do next year most of us beekeepers would be very discouraged." Bill Synott, then general manager of Tanquary Honey Farms at Hallock, Minnesota made this comment to me in September of 1944 when I was an inspector for this extensive organization.

Since that year I have worked for several large apiaries all over the western hemisphere and I can also add that what you do this fall will largely determine what you will be doing next year, barring unforseen calamity.

If a hive of bees has a "soul" and the queen is the soul of the colony we should be very concerned about this phase of management. As I am now in business for myself and never expect to manage more than 300 colonies I am more interested in fall management from the view point of the small operator who does all the work himself. Small operators can be more unorthodox, more individualistic.

Usually the beekeeper who operates on a modified two queen system has little to worry about concerning the quality of his queens in the fall. The

surviving young queen usually gives a good account of herself the next spring.

It has been my observation that the small operator has plenty of time to raise his own queens, if he will, for those few colonies that have failed to supersede at this time of year. Or if he thinks raising queens is beyond his ability he can always order some and have standard nuclei ready for colonies on the last inspection.

Late Requeening without Cage

There is no excuse for every colony not having a good queen even in the late fall. I once worked with the late Howard Shipton, a very prominent Iowa beekeeper. He would requeen colonies in November when there was no more brood in the hive. Working very quietly he would remove the old queen from the cluster and release the young one, without attendants. If the queen had been isolated for a few minutes and the cluster was handled gently the results were very good. I have introduced over 100 queens this way, successfully.

Every year at this season one wonders which is the better policy: to develop or obtain a good wintering strain or to gas everything and buy packages in the spring. As I live in a well timbered area of Wisconsin I am sold on wintering bees in a well drained maple woods with plenty of bushes to make an ideal windbreak. Good bee locations are very hard to find. You may find a good location after weeks of searching only to discover that the landowner does not care to have bees on his property. Informing him concerning better pollination will sometimes tip the scales in your favor.

With the excellent wintering sites available to me I don't even think about packing. If such sites were **not** available I would surely think of using package bees exclusively. In my book heavy packing and artificial windbreaks are too expensive for the results obtained.

Many good operators worry about the amount of sunshine in the apiary. If the woods is well drained, **including air drainage,** I never worry. What little sunshine we have here in the winter isn't much of a factor even where Nosema may become a problem. There is plenty of sunlight in a maplewood in winter **if** the sun should have a chance to break through the clouds.

Check for AFB

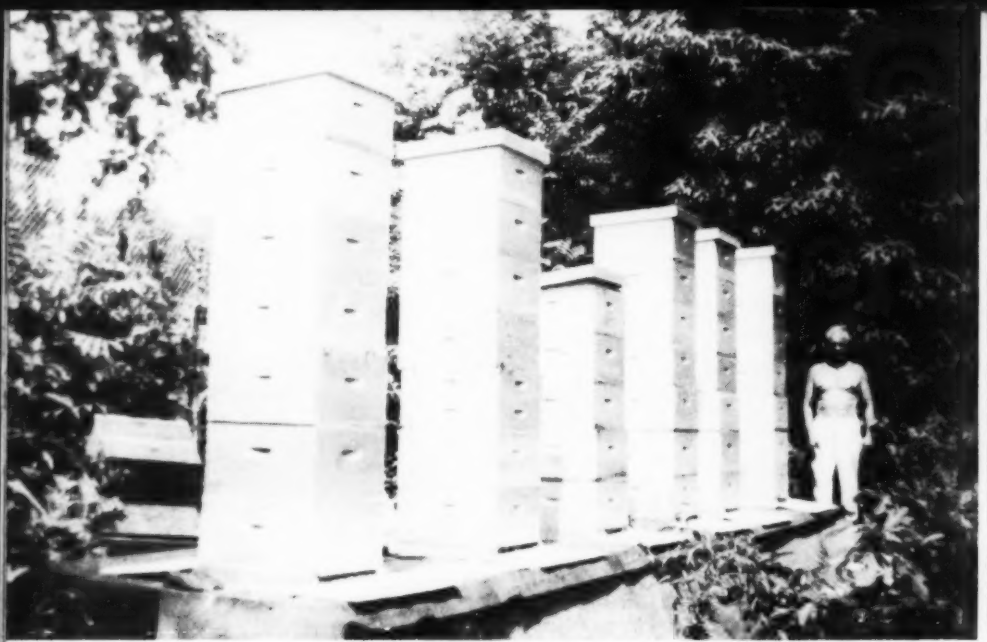
Having placed the bees in a good wintering location and having provided each hive with a young queen, the last fall inspection should determine if the bees are free from disease and if they have sufficient stores. I wouldn't feel satisfied if I didn't inspect each frame that contains brood. Although AFB is not a problem in my vicinity I have been in areas where much damage can be prevented by careful fall inspection. One inspection in the summer is not enough if you want to be sure. In one sense it will be very disappointing to find an excellent colony with one or two cells of AFB, but when you consider what you are preventing in losses next spring the disappointment is substantially dulled.

In regards to feeding and hive management in the fall I am surely drifting away from the more orthodox methods. As I am primarily interested in comb honey production I am continually looking for a strain of bees that keeps a very compact brood area and does not scatter its honey in the supers. Selective breedings is paying off.

When all the supers are removed in early fall these single brood nests are heavy. If the colony covers eight frames at about 50°F. in the early morning I do not have the slightest hesitation in wintering them in the single hive body. Results are always good, and besides, they will not need a second brood nest until late spring. Again, many good beemen will disagree, but I get good results and am well satisfied. This way I can better cull poor brood combs which tend to remain in brood nests where the two story hive is used.

I always try to have more than enough supers of feeder honey in dark combs for light hives whether it be fall or spring. If there is not enough honey I like to use the division board feeder to get the heavy syrup into the brood nest. Instead of using a float which usually comes with this feeder I pack the feeder rather loosely with excelsior. This prevents the drowning of bees which is usually such a mess when using a float. A little practice will teach just how much to add.

Fall management is just one link in the chain in my efforts to maintain a superior comb honey strain of bees which will operate profitably with a minimum of equipment and labor.



Picture taken in August 1954, shows Mr. Goldner of Bronx, N. Y., beside his skyscrapers. It apparently was a good honey year.

A Talk To Beekeepers

M. J. DEYELL

"Plan as though you're going to live forever and work as though you're going to die tomorrow."
—From Beekeepers' News

Let's Talk about the Weather

WHEN STRANGERS meet or are thrown together they may be at a loss to know just what to say but fortunately, they can always talk about the weather.

The weather thus far this year has been different. However, if we could examine past weather records we might find a year somewhat comparable to this.

What about Sun Spots?

I noticed an article in the August 1958 issue of Scientific American entitled "Hot Spots in the Atmosphere of the Sun". The writer mentions Galileo in the 16th century seeing spots on the face of the sun. People of that time paid little attention to his observations, in fact, they censored some of the statements.

Since that time astronomers have made a study of sun spots and the opinion is now held that they may affect weather conditions on our planet.

In some sections of the country, cool rainy weather has interfered with normal nectar secretion. Earlier in the season prospects appeared to be favorable for a good crop of summer honey, in fact, we were tempted to predict a good crop. As stated previously the best time to talk about a crop of honey is after it is extracted and in the cans.

We Hope for a Fall Flow

With all of the rain we have had recently fall honey plants should be in excellent condition and if we should have favorable weather during late August, September, and early October beekeepers in sections of the country where fall plants are abundant should secure a crop of amber-colored honey.

While the darker honeys are not considered so desirable as the lighter-colored honeys, by some people at least, there are those who prefer dark honeys. We are told that they contain more minerals than lighter-colored honeys and perhaps have more food value.

Further Experiences with the Two Queen Colony

In last month's talk I mentioned the 10 story two-queen colony and what I did in the way of removing a standard brood chamber, supposedly with one of the queens and putting it onto a new stand in the same yard. Well, when I examined this hive of bees that had seven or eight combs of brood when it was moved, I discovered that it was queenless. The bees did not start queen cells. At that time there was little if any honey coming in and therefore, conditions for rearing a queen were not favorable. It so happened that I had hived a small swarm in a single story brood chamber in that yard. I set this hive containing the swarm on top of the queenless hive, placing one thickness of newspaper between the two hives and punching one or two holes with a lead pencil to give the bees in the upper hive some ventilation.

After three or four days I examined this hive and found the two lots of bees had united and the queen was alive and laying. A few days later I examined the skyscraper colony from which the brood chamber had been removed and hoped to find the missing queen above the excluder and another queen below. However, I was disappointed in not finding any queen in the supers above the queen excluder but the queen below the queen excluder was alive and doing good work. It seems possible that the two queens may have fought each other through the queen excluder wires and the queen below may have stung the queen above.

I did remove three shallow supers of honey from the hive. However, I was somewhat disappointed in the amount of honey secured, especially since some of the other single queen colonies produced almost as much honey.

George Astell and son of Peterboro, Ontario. George believes in getting his boy started early in beekeeping.

Two-Queen Colonies Produce Big Crops

Some years ago I had occasion to visit Dr. C. L. Farrar, head of the Field Station at Madison, Wisconsin. It was during late July and the bees in that area had put up a fairly good crop of clover honey. Dr. Farrar took us out to one of his experimental yards. As we approached it we were amazed to see the hives piled 12 and 13 stories high. They were using square supers, 6¼-inch frames, 12 frames to a super.

I asked Dr. Farrar if there was any honey in the supers. He asked me to lift one of the supers off the top of the pile, which I did. I soon found that the supers were well filled with honey. That yard of around 30 colonies produced an average of 267 pounds per colony.

To secure maximum results in honey production from the two queen system it is necessary to plan carefully the correct system of management and follow through on it.

September Apiary Management

September is a lovely month in most parts of the North. Bees seem to realize that their ardent labors are coming to a close. At least I imagine I can detect

a slight difference in the behavior of bees during the late summer and fall months.

In order to winter colonies successfully there are at least three things that should be done. I have mentioned these points in the past and hope I may not be considered too repetitious if I mention them again, especially for the benefit of beginner beekeepers. You experienced beekeepers needn't read this unless you care to.

(1) **Have all colonies strong or populous in bees.** It is inadvisable to winter weak colonies, in fact, it seems preferable to unite such colonies in the fall, during September, before the season gets too late. A weak colony may die before spring and before it dies it consumes a considerable amount of honey. Why not save the honey the weak colony would use before it dies and unite the weak colonies in order to have good populous colonies to go into winter quarters? The object of uniting understrength colonies in September is that the united bees may have an opportunity before cold weather sets in, to form a winter brood nest.

(2) **Have each colony headed with a good queen.** This doesn't necessarily mean a queen reared this year, although generally speaking, young queens are better than old queens. It is not uncommon however, to find some two-year-old queens better than some year-old queens.

(3) **Provide ample stores for each colony.** Most beekeepers use the food chamber hive, which is a double story hive, the upper story called the food chamber, which in reality becomes a part of the brood chamber during spring and summer months. It is quite important that the upper brood chamber be well filled with honey, in addition to some honey in the lower chamber, for winter and early spring stores.

Just today I received a letter from a woman who had lost four colonies last winter. She wanted her father to feed the bees but he thought that they would pull through without any additional feeding, so she has made up her mind that she will provide an ample amount of stores for her colonies this coming winter.

The Final Check-Up

It is well some time this month to give each colony a thorough examination. It is not too late to introduce a queen which may be needed to take the place of an old queen that has begun to fail. Queens are more easily introduced in the fall then in the spring. Be sure also to check for disease, especially American foulbrood. A diseased colony, if not detected in the fall, may die during the winter or early spring months and spread disease to other hives. All diseased colonies should be properly disposed of in the fall.

LET'S TALK ABOUT HONEY PLANTS

(Continued from page 555)

often been noted. One beekeeper remarked that he had burned some trash in his pasture and the following year a circle of fireweed sprang up around the ashes. There must be something about the heat which causes the seeds to germinate. Fireweed should be protected and encouraged to spread since it makes a superior white honey.

Milkweed. The great round clusters of the common milkweed are a great attraction to insects of all kinds and furnish a fine honey. Great patches take over neglected fields and often produce a small surplus of honey. The acre of milkweed which I photographed was alive with bees.

Sumac. One side of our yard in Maine has become entirely filled with the staghorn sumac (**Rhus typhina**). For several days each of the large flower clusters had three to five bees on it all day long. The bushes were so high that I photographed the clusters through my six-inch telephoto lens.

Purple loosestrife. This well-known honey plant is not abundant in Maine but one patch grows in Thomaston in a wet field, along a swampy brook. The patch of purple flowers is very conspicuous and attracts hordes of honey bees as well as bumblebees. In Massachusetts it is an important honey plant in wet areas.

Wingstem or **golden honey plant.** An important honey plant in the late summer in many central states, wingstem (**Actinomeris alternifolia**) is often overlooked. Frank Pellett thought it was so important that he renamed it "the

golden honey plant" and gave it a prominent place in his honey plant gardens. Honeybees work the yellow flowers eager.y for several weeks while it is in bloom and store a yellow honey which is often mixed with that from goldenrod and aster. In parts of east Tennessee and Kentucky it is locally known as stickweed and is highly regarded by local beekeepers.

THE TRAGEDY OF THE SPITTLE BUG CONTROL

(Continued from page 537)

terials put on a field one year will show up on the crop the following year. Some have a residual effect that lasts several years.

Cut worms are not the only insect that can build up to damaging proportions under a spray program. Others are the aphids and mites. These are extremely difficult to control by chemical means as they have so many generations a season and develop resistant mutations so quickly. In two or three years red mite can develop immunity to such deadly poisons as parathion and TEPP.

Before any farmer starts using a spray program he should understand the possible serious consequences. He must realize the minute he starts upsetting the ecology of nsects in the field, anything can happen. He must realize the first spray will have to be followed up with more and more stronger and stronger poisons, that get more and more expensive. Eventually the spray program may cost more than the value of the crop.

Of serious consideration also, he must realize the fact he does have a responsibility to prevent the poisoning of the food he produces and sells. Our meat and milk must be kept poison free as possible. Many of these spray materials have an accumulative effect on the body that over a period of years may result in malignant diseases. We all realize this is a free country and everyone has the right to make and sell a product, but we can hardly include the right of anyone to poison the public or our bees.

WHO HURTS WHOM?

(Continued from page 542)

On the next visit to the store the beekeeper finds not one but two cases of the same brand of honey he had cleaned up on his last visit and a few jars of his own. Apparently it is too much work for the grocer to inform the beekeeper of his needs. It is easier for him to let a wholesale salesman go over the shelves and place the order, leaving the store manager nothing to do but sign the order. The grocer certainly did not appreciate the favor done by the beekeeper.

To date I have not seen any large packer of chunk honey that does not have crystallized honey on some of the markets. Business is becoming more and more impersonal. About the only one that knows one well is the corner grocery where he may get credit. There aren't many of these stores left; and if they are operating, their profits are generally low.

One beekeeper saw a new store opening. Knowing that it would be an outlet for honey and the manager was in need of stock and credit, he offered to put in his honey on concession. This was done. Later more honey was sold in the same way. On another trip there were three cases of another man's honey on the shelf next to his honey which the grocer had paid for. The next time the grocer took honey from this beekeeper he got a request for payment on delivery. He looked puzzled but paid. He didn't ask for an explanation of change of policy for probably he knew why he was presented with a bill for payment.

One Way to Get an Order

One of the local store manager's ways of avoiding buying from the small operator is to say, "I have some now. Come back in about 30 days" He knows that usually the small man cannot afford to come back again without making a sale. The producer should say: "I will be back in a month and how much would you like to have me deliver"? Generally tht manager is surprised and will give an order for a case or two.

A poor sales method used by both the large packer and the smaller beekeeper is to put low quality honey in

(Continued on page 570)

Beekeeping Cross-word Puzzle

Solution will appear in next month's issue.

Mrs. R. P. SCHLABACH, Medina, O.

DOWN

1. Bees' domicile
2. Freed from duty
3. Flower of the genus Lilium
4. Prefix meaning in
5. Bees immigration to form new colony
6. A new queen can cause this
7. Diminutive for Margaret
8. Common verb
9. Concerning
10. A breach of faith
11. Kindles
12. Direction (abbr.)
15. Association connected with schools
18. Unfinished
20. A state (abbr.)
23. A feeler
24. Mountain pass
25. Interjection of surprise
28. Arrangement of combs
29. Keeps the queen out
31. A remedy for nosema
32. A fruit
34. Rain during honey flow makes bees ----------
36. Preposition meaning before
38. Maryland beekeeping official
42. Empress: Russian
44. Dr. Dyce: process for ---------- honey
45. An awn: Biol.
46. Used for capturing a swarm
48. Law of Moses
50. An emetic
53. First name of world famous authority on bees
56. Roadside --------- bad for bees
59. Part of the Bible (abbr.)
60. Uncovered
63. --------- comb honey
65. Part of a chair
67. Indefinite article

ACROSS

1. New Hampshire specialist in beekeeping
7. Michigan official
13. Roman numeral
14. ---------handling may cause swarming
16. The queen bee will do this
17. Beginners in beekeeping should wear one
19. Poor handling may cause this
21. Printer's measure
22. Grand price for T. V.
24. Fetter
26. Afternoon (abbr.)
27. A continent (abbr.)
28. Honey is good on this
29. Greak letter
30. Flower, genus Trifolium
33. Poetic for over
35. A hive may be said to ---------
37. A rubber tree
38. Handle (Roman antiq.)
39. Agitate
40. Arabian Chieftain
41. Fissure
43. Roman numeral
44. Vermont beekeeper
47. Shoshonean Indian
49. Out of the way
51. An albino bee is --------
52. To execute
54. Bee: latin
55. Throws off
57. Suffix forming a degree
58. Black nightshade
60. Fish
61. Egyptian Sun God
62. Pertaining to the ears
63. Rotating piece on uncapper
64. Dark viscous liquid
66. Owns
68. Essential character
69. Altar: latin
70. Resinous secretion
71. Scatters for drying
72. Possessive pronoun

Asked & Answered

Making Smoker Fuel

Q. Quite some time ago I ran across a formula for using a solution of powdered borax and water to soak burlap or other rags in to make smoke material. I made up a supply and used it and it was very satisfactory, but I have forgotten the proportions and cannot locate the formula.

A. It was not powdered borax but salt peter that was used to make a solution in which to soak burlap or other rags, which when dried could be ignited readily as a smoker fuel. The plan was originated by Wm. L. Coggshall who took old burlap sacks, rolled them in a long roll, tied at intervals of four or five inches and then chopped them into short lengths with a hatchet on a block. The ends were then dipped into the saltpeter solution and allowed to dry. This fuel, when lighted on the end covered with the solution, would ignite very easily with the result that a vigorous smoke could be secured almost instantly.

Introducing Queen to Emerging Brood

Q. Can you give me any information on the method of introducing a queen to emerging brood and very young bees?

A. We have read with interest your letter regarding a safe way of introducing a queen. We have heard of the method but have not actually tried it. It stands to reason however, that a valuable queen could be introduced by this method, namely, placing a hive containing some combs of sealed brood ready to emerge and releasing a queen from her mailing cage. This super containing the combs of brood would be placed on top of a colony, over a screen, so that no bees from the bottom hive could gain admission to this top hive. Young bees emerging from the cells would not harm the queen released in this hive. In due time quite a number of bees would have emerged from cells. Later on this nuc with the queen could be united with a queenless colony by the newspaper method but if this is done during a dearth of nectar it would be well to feed both lots of bees sugar syrup before uniting.

Building Membership

Q. We are trying to form a beekeeping association in our locality. Could you help us to build membership?

A. Here are some of the ideas that have worked well for successful beekeeping organizations. We are passing them on to you:

1. Adequate publicity of meeting dates by post card or letter, or through the press whenever possible.

2. Planned programs prepared by a committee. Panel discussions. Choose a management article from Gleanings in Bee Culture or another beekeeping journal and have a discussion on it. Have a question and answer period.

3. Have a social period following the meeting. Only coffee and doughnuts are necessary. This helps folks to get acquainted.

4. Show movies at least quarterly. Gleanings in Bee Culture offers several color films on a free loan. Lists of others can be obtained from your Extension Apiarist or Chief Apiary Inspector, or by writing the staff of Gleanings.

5. Distribute timely beekeeping literature available from your State College of Agriculture or from the different beekeeping journals.

Bees Suddenly Become Cross

Q. Can you explain why bees become so viciously cross all of a sudden when at other times they are gentle?

A. The temper of the bees depends largely upon the character of the honey flow. Where there is an abundance of nectar available during most of the day the bees are usually good natured, but if nectar is available only a part of each day the bees are liable to become cross when the flowers quit yielding. When the honey flow closes suddenly the bees are usually cross. As the season advances the bees are apparently more inclined to sting than early in the season. Beginners especially should bear these things in mind and use more precautions against stinging when the flowers are not yielding and as the season advances.

NEWS and EVENTS

LADIES' AUXILIARY
Ohio Beekeepers' Association
July 26 and 27
Medina, Ohio

The Ladies' Auxiliary of the Ohio Beekeepers' Association met July 26 and 27 at Medina, Ohio for their second annual meeting. The Auxiliary was organized at Columbus, Ohio in July 1957 with a charter membership of 19 members and at present we have 43 members.

Each lady who joined the Auxiliary this year received an aqua pin with a chenille bee and green ribbon bow attached and filled with red and white sweet clover.

On Saturday afternoon Mrs. Ernest D. Gilbert gave us a most interesting talk on "Home-Making in Japan", and showed us a lovely kimona and other interesting articles she had brought fom Japan.

Vice President, Mrs. W. E. Dunham, read the Constitution of the Auxiliary which was approved and adopted by those present.

Miss Donna Humpheries and Miss Dixie Dyer of Medina judged the original honey recipe contest and the following won prizes. Mrs. Harley Temple of Brecksville, Ohio won first prize for her original Honey-Nut Orange Bread. Mrs. Iola Jean Stegemoller of Lebanon, Ohio won second prize for her Honey Creamed Beets and Mrs. Ernest D. Gilbert, honorable mention for her Honey Sweetened Rhubarb Sauce.

A report from the chairman of the nominating committee, Mrs. Norman Dunham, suggested that the present officers serve for another year. This was approved by the group present. President, Mrs. Emerson Long, St. Paris, Ohio; Vice President, Mrs. W. E. Dunham, London, Ohio; Sec'y.-Treas., Mrs. Ernest D. Gilbert, Columbus, Ohio; Recording Sec'y., Mrs. S. E. Bailey, Worthington, Ohio.

A new name for the Auxiliary was chosen, "Buckeye Honey Belles" of the Ohio Beekeepers' Association. — Mrs. S. E. Bailey, Recording Secretary.

TEXAS
Beekeepers' Association
November 10 and 11
College Station
Texans Go Formal

The informal get-together of Texas Beekeepers at Cashion Cabin each year has been abandoned for a formal banquet in the Memorial Student Center. The banquet and meeting of the Texas Beekeepers' Association will be held at College Station on November 10 and 11. More details will be published later.

MIDWESTERN
Beekeepers' Association
September 14, 1958
Kansas City, Missouri

The Midwestern Beekeepers' Association will meet at the home of Mr. and Mrs. Walter Hill, 8440 Jarboe, Kansas City, Missouri at 2:30 P.M., Sunday, September 14, 1958. Everyone welcome.—Carroll L. Barrett.

NORFOLK COUNTY
Beekeepers' Association
September 7, 1958
Norwood, Mass.

The September meeting of the Norfolk County Beekeepers' Association will be held September 7, 1958, 2 p.m. at the home of Mr. and Mrs. Oscar Saterdel, 337 Summer Street, Norwood, Massachusetts. An interesting and in-

TAMPA, second largest city in Florida and the site of the next American Beekeeping Federation meeting, with a population of more than 250,000, is the hub of Florida's fabulous west coast area. This photo shows Tampa's downtown skyline at the mouth of the Hillsborough river.—Tampa News Bureau Photo.

structive bee meeting will be held and a corn roast will be enjoyed. Come prepared for a good time.—Edith L. Colpitts, Corres. Sec'y.

AMERICAN BEEKEEPERS' FEDERATION
January 25-31, 1959
Tampa, Florida

The anual meeting of the American Beekeepers' Federation will be held in Tampa, Florida, beginning January 25 and running through January 31. In connection with the Beekeepers' Federation, the Apiary Inspectors of America will hold their annual meeting, also the Southern Conference will hold their annual meeting on the 26th and 27th. The Hillsborough Hotel in downtown Tampa will be headquarters for these combined meetings.

Following this meeting, Tampa, the only city in the world to be captured each year by pirates, is girding for battle against the Buccaneers of Ye Mystic Krewe of Gasparilla, held in connection with the Florida State Fair, opening on Tuesday, February 3.

Following the beekeeping meetings, and in connection with the Gasparilla celebration and the State Fair, the National Honey Show will be held. Those preparing to enter their honey in this great show should contact Fred V. Oren, Superintendent, National Honey Show, 2516 Silver Lake, Tampa, Fla.

The program committee for these various groups is now working out an interesting and worth-while program.

Reservations for attendance at these combined meetings and Honey Show can be made by contacting the Hillsborough Hotel, Tampa, Florida.—H. S. Foster, Chairman.

WESTCHESTER COUNTY
Beekeepers' Association
New Rochelle, N. Y.
September 21, 1958

The Westchester County Beekeepers' Association will hold its next meeting at the home of Mr. and Mrs. J. A. Bailey, 97 Lockwood Ave., New Rochelle, N. Y., on Sunday, September 21, at 2:30 p.m. At this meeting, plans will be discussed in regard to our "Winter Program". Bee problems will be answered by our expert beekeepers. Let's all meet at the Bailey's new home and enjoy a social afternoon with our fellow beekeepers. Refreshments will be served.—Mrs. Alfred Roth, Pub.

MIDDLESEX COUNTY (MASS.)
Beekeepers' Association
Winchester, Mass.

The last summer meeting of the Middlesex County (Mass.) Beekeepers' Association will be held at the home of Dr. and Mrs. Herbert Anderson, 184 Ridge Street, Winchester, Mass. Dr. Anderson promotes the use of honey. At this meeting some lucky person will become the owner of the club hive.—Lolita Pamplin, Corres. Sec.

ENTOMOLOGICAL SOCIETY OF AMERICA
December 1, 2, 3, and 4
Salt Lake City, Utah

The Sixth Annual Meeting of the Entomological Society of America will be held at the Hotel Utah in Salt Lake City, Utah, on December 1, 2, 3, and 4. A paper-reading session of the Apiculture Subsection will be held during this period. In addition, a symposium led by F. E. Todd of the Bee Culture Section, Agricultural Research Service, USDA, on "Methods of Testing the Effects of Insecticides on Honeybees" is planned as a high spot on the apiculture program.

The program committee wishes to announce that the deadline for receipt of titles and abstracts is September 1. A number of papers contributing to an outstanding program covering as many phases as possible of apiculture is sought by the Apiculture Subsection officers.

Utah is known as the "Beehive State" and the straw skep is displayed prominently throughout the area. Because of the important role of the honeybee in Utah's history and economy, it would be fitting to have this year's meeting of apiculturists one of the best in years. Now is the time to wind up that bit of research and present it at Salt Lake City.

Titles and brief abstracts should be sent as soon as possible to: Dr. L. D. Anderson, Chairman, Program Committee, Department of Entomology, Citrus Experiment Station, Riverside, California.—W. C. Rothenbuler, Chairman, M. D. Levin, Secretary, Apiculture Subsection.

LOST, ONE HIVE TOOL

(Continued from page 523)

A short time afterward the old tool turned up as lost items invariably do when replaced. Found it under some burlap stored in the workshop.

Now Ted, with tongue in cheek, accuses me of hiding our tool so I could use it myself for various and sundry purposes. Just like the man mentioned in his very interesting article in Gleanings some time ago. I'll grant the versatility of the tool, but swear by all that's holy that I did not hide it.

To close the matter and to change the subject I went up to the beeyard to gather bloom from the linden tree which shades our hives. Although this tree has been in a neighbor's yard for years and years it wasn't until recently we knew what kind of a tree it was. We called it our bee tree for the bees really work on it in the middle of June. We had asked the elderly gentleman who planted the tree many years ago but he knew not either. Said his family had bought the tree from a peddler for the sum of two dollars.

A piece appeared in the magazine section of our local newspaper describing the tree and its many uses. The fact which intrigued me was that the blooms and leaf bracts of the linden or basswood could be dried and brewed as tea. This tea is recommended as a soothing drink for jangled nerves.

Now the next time hubby gets irky I'll brew him a pot of linden tea. Better still I'll drink a cup myself. That is if the bees will allow me to horn in on their abundant pastures for a wee share of the blossoms.

Obituaries

DR. C. A. JAMIESON

THE UNTIMELY death of Dr. C. A. Jamieson, while on vacation near Killaloe, brought to a close the career of a devoted scientist in the field of apiculture. As Chief of the Apiculture Division, Central Experimental Farm, he has conducted research work which has not only gained international recognition but has made a valuable contribution to the Canadian honey industry.

The scope of his work and the esteem in which he has been regarded by his fellow workers are reflected in the numerous associations and societies to which he belonged.

Dr. Jamieson was a member of the Agricultural Institute of Canada, American Association for the Advancement of Science, American Beekeepers' Federation, Entomological Society of America, Canadian Beekeepers' Council, Canadian Entomological Society, and the Province of Ontario Apiarists' Association. He was also a member of the Professional Institute of the Public Service of Canada and the Sigma Chi Fraternity.

Dr. Jamieson was a native of the Lake Simcoe district where he received his early education. Later he attended the O.A.C. at Guelph where he received a B.S.A. degree specializing in apiculture. In 1938, he first came to the Experimental Farm where he practiced his profession, later to become Chief of the Apiculture Division. During this period, he went to Cornell where he received his Ph.D.

He leaves his wife, the former Ruth Hopkins of Niagara Falls, and three daughters, Valerie, Sandra, and Catherine, all at home. A brother, Harold Jamieson is also a resident of Ottawa. Another brother, Walter, lives in Toronto and a sister, Mrs. William Parker, resides at Guelph.

Buy and Sell

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate: 18c per counted word, each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in by the 10th of the month, preceding publication.

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MICHIGAN'S FINEST WHITE CLOVER HONEY. New sixties. Fully ripened. You'll be pleased. Sample 20c. JOHN McColl, TECUMSEH, MICH.

TUPELO, wild flower or buckwheat in 60's. Honey candy. EN-R-G FOODS, INC., BOX 232, LANCASTER, PA.

MICHIGAN'S finest raspberry, basswood, clover comb honey, in 4 x 5 window cartoned sections. Deluxe extra fancy, $9.00; Extra fancy, $8.00; Fancy, $7.00; No. 1, $6.00; No. 2, $5.00 case. E. Z. QUICK WAY B FARMS, BOYNE FALLS, MICHIGAN.

FOR SALE—Clover honey in 60's. NORTH CENTRAL HONEY PRODUCERS LEAGUE, BARABOO, WISCONSIN.

BEFORE BUYING or SELLING honey, contact our One-Stop Wholesale Market Warehouse where Seller meets Buyer. Large selection 12 months of the year. HUBBARD APIARIES, Manufacturers and Processors, ONSTED, MICHIGAN, Phone 103.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTICE—We can not guarantee honey buyers' financial responsibility, and advise all beekeepers to sell for cash only or on C.O.D. terms except where the buyer has thoroughly established his credit with the seller.

WANTED—All grades of extracted honey. Send sample and price. DEER CREEK HONEY FARMS, LONDON, OHIO.

CASH FOR BEESWAX. Write as to quantity and we will quote price. MEUNCH-KREUZER CANDLE CO., INC., SYRACUSE, N. Y.

WANTED—White extracted or comb honey. Send sample. MILLERSPORT HONEY CO., MILLERSPORT, OHIO.

BEESWAX WANTED—Highest prices paid in cash or trade for bee supplies. THE A. I. ROOT COMPANY, MEDINA, OHIO; COUNCIL BLUFFS, IOWA; SAN ANTONIO, TEXAS.

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CASH for Amber and Buckwheat Honey. Best cash price for wax. HUBBARD, ONSTED, MICH.

WANTED, chunk comb and extracted honey. Mail sample and price. STOLLER HONEY FARMS, LATTY, OHIO.

WANTED—All grades of extracted honey, cans or carloads. Send sample and best price. Cash. Michigan Beekeepers, I have lots of empty 60's, take and fill them up and save the price of the cans. HONEYMOON PROD. CO., 39 E. HENRY ST., RIVER ROUGE 18, MICH.

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ONE SUPERIOR lifetime eight-frame extractor, standard size, perfect condition, $100. One four-frame Root reversible hand-powered extractor, jumbo size frames, good shape, $35. R. W. BARNES & SON, OAKLAND, NEBR.

FOR SALE—Two tube vacuum honey filler in good used condition suitable for a small packer. Write for details. SCHULTZ HONEY FARMS, RIPON, WIS.

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ROYAL JELLY BEAUTY CREAM in ¾-oz. jar, $1.25 to beekeepers, retails for $2.50; 1-oz. jar, $1.50 to beekeepers retails for $3.00; 2-oz. economy size, $2.00, retails for $4.00. PRAIRIE VIEW HONEY CO., 12303 TWELFTH ST., DETROIT 6, MICHIGAN.

MAGAZINES

THE SCOTTISH BEEKEEPER (The official organ of the Scottish Beekeepers' Association.) Scottish in character, international in appeal. Annual subscription $2 post free. Sample copy from ROBERT N. H. SKILLING, F.S.C.T., 87 KING STREET, KILMARNOCK, AYSHIRE.

Archiv fur Bienkunde, International journal for Bee Culture and beekeeping economics. Founded in the fall of 1918. Oldest economic bee journal in the world. Praised again and again for its decades of independent leadership through many endorsements and advice as a valuable source also for the practice. Classic. Yearly DM 5.50. Any aspiring beekeeping friend will receive a sample copy. BIENE-VERGLAG, GIELBACK, LINDAU, GERMANY.

BEE WORLD, the international journal of the Bee Research Association published monthly, contains the latest research reports on bees and beekeeping. With Apicultural Abstracts it costs $5.50 per annum, or $6.00 including membership of the Bee Research Association. Apicultural Abstracts only $4.50 per annum from the Hon. Subscription Secretary, Bee Research Association, 10 BARNETT WOOD LANE, ASHTEAD, SURREY, ENGLAND.

AFRICAN BEEKEEPING, successor to the S. A. Bee Journal, monthly, sub. 10/- per annum. THE EDITOR, P.O. Box 4, Bergvliet, C. P., South Africa.

Know interesting facts concerning the bees of India, about species of bees found in India only, through the INDIAN BEE JOURNAL, published from India in English. Annual Subscription $2.25, sample copy 40 cents. Old Volumes $2.50 per year. Obtainable thrrough The A. I. Root Company, Medina, Ohio, U.S.A. to whom the dollar might be remitted.

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BACK TO SCHOOL

(Continued from page 547)

Honey Spice Cookies

One and ⅓ cups sifted flour, 1 teaspoon baking powder, ¼ teaspoon soda, ½ teaspoon salt, ⅛ teaspoon cloves, 1 teaspoon cinnamon, ½ cup soft butter, ¾ cup honey, 1 egg, 1 cup bran, and 1 cup raisins.

Sift together flour, baking powder, soda, salt and spices. Blend butter and honey; add egg and beat well. Stir in sifted dry ingredients, bran and raisins. Drop by teaspoonfuls, about 2½ inches apart onto greased baking sheets. Bake in moderate oven, 350°F. about 15 minutes. Yield: 3 dozen cookies, 2¼ inches in diameter.

Honey Nut Cookies

One-half cup shortening, ¼ cup brown sugar, ¾ cup honey, 2 eggs, 2 cups sifted flour. 2 teaspoons baking powder, ½ teaspoon salt, ¼ cup milk, 1 teaspoon vanilla, ½ teaspoon lemon extract and 1 cup chopped nut meats.

Cream together shortening and sugar; add honey gradually. Beat in unbeaten eggs, one at a time, until each is thoroughly blended. Sift together flour, baking powder and salt. Add to cream mixture alternately with milk. Add vanilla and lemon extract, and nut meats. Mix well. Drop by teaspoonfuls two inches apart on greased cooky sheet. Bake 15 to 20 minutes in a moderate oven 350°F. Yield: 6 dozen cookies.

WHO HURTS WHOM?

(Continued from page 561)

a fancy container to be sold in gift shops. It is usually purchased as a gift and offers an opportunity to get honey into the home of a prospective customer who would buy again, **if the honey was good.** Honey in gift packages should always be good flavored and of high quality. In Tennessee, one gift shop owner told me, "Your honey is the first I have ever had where the customer bought to get the honey and not the container". This small place sold a surprising quantity of honey each year, ordering three to six cases each time.

Don't Mislabel Honey

One error in marketing honey (surely not by beekeepers) is to mislabel the product. I recently received from a friend a gift box containing a ceramic bee. It was labeled on the box, "Our ceramic bee is filled with **U. S. Grade A Fancy white honey".** A sticker on the box reads: "White Orange Blossom Honey". I presume all orange blossoms are white or tinged with pink so assumed the honey was white. It had been some years since I had seen good orange blossom honey so I eagerly opened the package, expecting the delicious honey I had known previously. What a surprise! The five-ounce plastic package contained very thick deep red honey. To me it tasted as though it had been scorched. I don't believe anyone receiving a package of this sort would ever recommend it to his friends, from the honey it contained, though they might buy again for the ceramic bee. It has been on our table over two months where four people eat honey and very little of the five ounces is gone.

One of the newest and best innovations to get honey into new user's hands is the filling of an attractive container with creamed honey (creme) made from good quality honey. There is no danger of overheating the honey to prevent granulation and makes for good sales. A little explanation of the product would be helpful.

Recently I observed honey "creme" that had something wrong with the processing or storage of the product. It was packed by one of the largest, honey packers in this country. On top was half an inch of white layer-like foam, next was a quarter-inch layer of dark liquid honey and in the lower portion was the granulated honey one would expect. Anyone seeing such honey on the market would feel it was not of good quality and it isn't. I bought a jar to show that even honey creme must be prepared properly and stored correctly to keep it in good condition.

It is now possible to purchase honey in bottles labeled similar to the names of whiskey brands and other alcoholic drinks. Most of them are sold for jokes at an extremely high price. They may make a good joke on the persons receiving them but I am wondering if those individuals would buy honey because of having a joke played on them. I doubt it. There is only one advantage that I can see which would come from this type of packaging of a fine product

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The Australasian Beekeeper

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CANADA'S
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and that would be popularizing the term honey. Honey is a product with fine qualities that should not be associated with degrading jokes.

At the present time larger than usual stocks of honey are reported in the hands of the producers, especially the larger producers. Could it not be that the present common sight of granulated honey on the market the last few years is contributing to a depression of honey sales? Certainly wrongly labeled gift packages and poor quality honey in high-priced containers are not conducive to increasing honey sales. We are not taking full advantage of our marketing opportunities.

There is need for greater cooperation between the small beekeeper and the large one to prevent honey from getting "stale" on the market. Packers should be sufficiently interested in their product not to put poor quality, mislabeled gift packages in fancy containers and distribute wholly for the money in it.

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EDITORIALS

(Continued from page 545)

honey, presumably because the honey was gathered by wild bees. It seems obvious that when the honey secured from a bee tree is compared with honey taken from a bee hive in the same locality there would be little, if any, difference in the flavors or quality of the honeys.

It seems likely, however, that the name wild honey would have a greater appeal to the majority of people than would ordinary honey such as clover or goldenrod.

And so, tame bees, so called, may suddenly become wild and wild bees that swarm from a bee tree may cluster on a bush near a beekeeper's yard and become tame bees.

Honey Price Support

UNITED STATES Department of Agriculture, Commodity Stabilization Service, Sugar Division, reports that loans made on honey as of June 25 total 188,817 pounds, compared with the same period in 1957, 131,890, and the same period in 1956, 86,850.

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